ARTISAN

JANUARY · 1950

directory and show

NUMBER

RESIDENTIAL AIR CONDITIONING • WARM AIR HEATING • SHEET METAL CONTRACTING

For The BEST In Registers . . .
THE AIR CONTROL LINE
For ALL Your Requirements

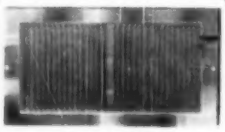
You'll find an AIR CONTROL Register that is ideal for *every one* of your requirements. For heating or cooling; gravity or forced air; sidewall, baseboard, floor or ceiling air delivery — Air Control has the finest register. Air Control Registers are carefully designed to give the best in performance for any application.

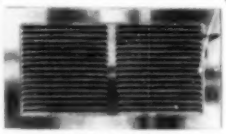
Your customers will be pleased with their smart appearance and ease of operation—you'll be more than pleased with their outstanding performance and trouble-free operation.

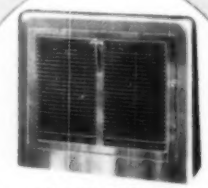
See your AIR CONTROL Jobber for your 1950 requirements. You'll find that he will be pleased to give you prompt and efficient service on the Complete Air Control line.

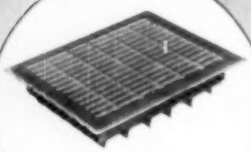
Here's your complete Air Control line: 3 types of Air Conditioning Registers, including the famous No. 10 Series with "Push Button" control; Gravity Registers with balanced damper; Ceiling Diffusers with Air Flow Rings; Floor Registers and Faces, two styles — Rigid-Lock Design and Unit-Grid Design; Stackhead Dampers; Damper Control Sets; Adjustable Ceiling Ventilators; Ventilators; Casing Clips, etc.

No. 10 SERIES
"PUSH BUTTON" Control

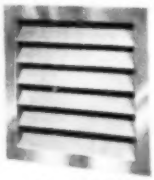

No. 110 SERIES

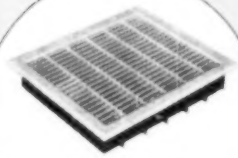

No. 210 SERIES


GRAVITY REGISTER
"Balanced Damper"


No. 40 FLOOR
REGISTERS
"RIGID-LOCK Design"

CEILING DIFFUSERS
"Air Flow Rings"

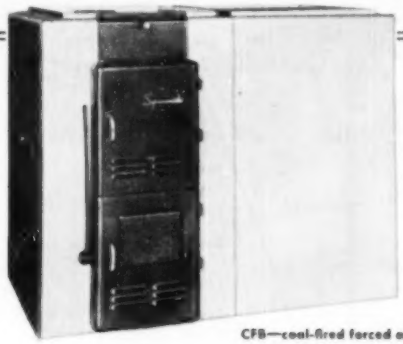

VENTILATORS


No. 30 FLOOR
REGISTERS
"UNIT-GRID Design"

AIR CONTROL PRODUCTS, INC.
MICHIGAN

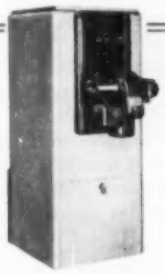
WILSON'S HAIR FILTERS and Syncromatic COUNTER FLOW for higher heating efficiency

In conjunction with its efficient Counter Flow principle of warm air heating, Syncromatic Corporation insures super-clean conditioned air by using Wilson's *Hair* Filters, Honeycomb type, in all units—coal, oil and gas. Wilson's *Hair* Filters mean more cleaned air per filter—maximum cleaning without clogging.



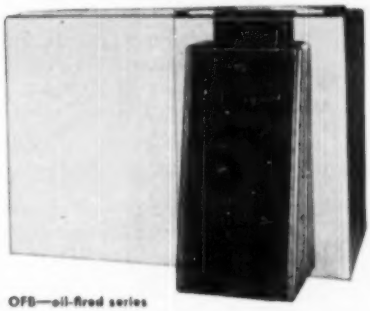
CFB—coal-fired forced air series
Also, coal-fired gravity furnaces

Syncromatic COUNTER FLOW



Oil-fired Hi-Boy

Gas-fired Hi-Boy



OFB—oil-fired series

The famous Edgeseal, the original *Hair* Filter with the patented self-sealing edge.

The popular Honeycomb, the dressed up *Hair* Filter that is so easy to handle.

SAVE DELAY, DOUBT AND DOLLARS

Send for samples with details and prices today. Wilson's *Hair* Filters are another quality product made by Wilson & Co., Inc.—world-famous for superior quality in Meats, Sports Equipment, Pharmaceuticals, Hair Products, etc.

WILSON & CO., INC., (Air Filter Division) 4100 S. Ashland Ave., Chicago 9, Ill.

INDOOR COMFORT

WILSON'S HAIR FILTER

WILSON & CO.

AMERICAN ARTISAN

RESIDENTIAL
AIR CONDITIONING
WARM AIR HEATING
SHEET METAL CONTRACTING

Member—Audit Bureau of Circulations
Member—Associated Business Papers

Merged with American Artisan are "Warm Air Heating" and "Furnaces and Sheet Metals"

MANAGEMENT SECTION

News Roundup 97
A Year of Contrasts 101
Human Tensions—Unique Sales Approach . . 103
You Control Your Sales Future 106
Cost Control Guards Profit 108
If You Lost Money in 1949, Get a Tax Refund 110
We Are Older Than We Thought 112
Vital Legislation to Be Debated 113
SMCNA Warm Air Heating Ordinance . . . 115

RESIDENTIAL AIR CONDITIONING SECTION

Suspended Installation in Printing Plant Conserves Valuable Floor Space 121
High Velocity Piping System Features Low Velocity Discharge 126
Profit Possibilities in Package Blowers . . . 130
Warm Air Heats Large Buildings 133

AMERICAN ARTISAN SHOW SECTION

Southwest Heating and Ventilating Exposition and 56th Annual Meeting of ASHVE . . . 140
List of Exhibitors 142

SHEET METAL SECTION

Pre-plated Metals Offer Beauty, Ease of Fabrication 157
Reid—Gravity Weather Cap 160
Stainless Steel Fabrication, No Special Equipment Needed 162
Metal Action in Braking 164

DEPARTMENTS

The Editor's Notebook 6
Association Activities 169
Convention Reports—
Pennsylvania Convention 170
Equipment Developments 173
New Literature 222
Industry Items 228

EDITOR
John E. Peterson

ASSOCIATE EDITOR
John McCullough

ADVERTISING STAFF
Wallace J. Osborn
New York City
MUrray Hill 9-8293
Robert A. Jack
Cleveland
YEllowstone 1540
James D. Thomas
George C. Cutler
Chicago
STate 2-6916
R. Payne Wettstein
Los Angeles—DUnkirk 8-2286
San Francisco—YUkon 6-2522
Portland—ATwater 4107

Published monthly by Kerney Publishing Company, 6 N. Michigan Ave., Chicago 2, Ill., U.S.A.
Copyright 1950 by Kerney Publishing Company

Publisher—Frank P. Kerney
Manager—Charles E. Price
Production Manager—L. A. Doyle

Yearly Subscription Price—U.S. and possessions, $3.00; Canada, Cuba, Mexico, South America, Central America, $4.00; Others, $6.00. Single copies, U.S. and possessions, $.35. Back numbers, $.60. January, 1950, Directory Issue, $1.50 per copy. Entered as second-class matter, July 29, 1922, at the post office at Chicago, Illinois, under the Act of March 3, 1879. Additional entry at Milwaukee, Wisconsin.

Founded 1864

JANUARY, 1950

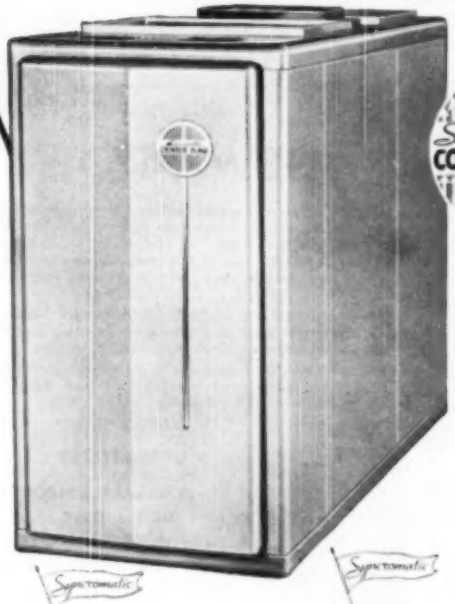
Volume 87, No. 1

Syncromatic

ANNOUNCES THE "700" SERIES

TOTALLY ENCLOSED STEEL OIL-FIRED FURNACE

INCORPORATING THE FAMOUS SYNCROMATIC COUNTER FLOW DESIGN WITH ADDED FEATURES WHICH PLACE IT AT THE HEAD OF THE PARADE



Syncromatic COUNTER FLOW

Completely enclosed unit. No sheet metal screws in casing assembly. Interlocked jacket seams are air tight.

Attractively finished casing in green hammerloid.

Efficient quiet Syncromatic oil burner equipped with "Miracle Meter" firing head which successfully burns catalytic oil and produces high CO_2's.

Heavy solid base section raised off floor completely seals unit.

Pre-cast insulating refractory shipped in place.

Quiet, Efficient Rubber Mounted Blower

Syncromatic patented Counter Flow system insures maximum heating efficiencies.

Heavy 10 gauge heat exchanger resists high temperatures indefinitely . . . prevents expansion and contraction noises.

JUST CHECK THESE PROOFS OF SYNCROMATIC LEADERSHIP IN DESIGN . . . FOR COMPLETE INFORMATION WRITE OR CALL

Syncromatic Corporation
WATERTOWN, WISCONSIN

the editor's notebook

Iowans Prefer . . . Warm Air Heating

A substantial market throughout Iowa for heating equipment is indicated by a statewide survey recently completed by the *Des Moines Register and Tribune*. The survey shows that about 70,000 of the state's 701,000 families, or one in ten, plan to buy heating equipment during the next 12 months. Of these, more than 40 per cent, or 30,000 families, said they intended to buy an entirely new unit.

Comparison with a similar study made in 1947 shows a substantial shift from the use of coal to the use of oil as a fuel for heating homes. Coal users decreased from 71.8 per cent of the families in 1947 to 57.7 per cent in 1949. Gas heating increased from 7.1 to 10.9 per cent; oil, from 17.0 to 29.8 per cent.

About three-fourths of the Iowa coal users still shovel their coal, indicating that about 315,000 Iowa home owners are potential buyers of stokers.

When the Iowans were asked what kind of fuel would be their first choice if they were selecting a new heating plant or building a new home, preferences differed sharply from what they are using. Oil is the leader in the Iowa totals, but city gas is the leader in cities while the popularity of coal is sharply off.

Warm air heating is not only predominately more popular than other methods of heating in Iowa, but its popularity is increasing. In 1947, 84.6 per cent were using warm air and in the 1949 survey this percentage rose to 87.6 percent. Hot water popularity dropped from 8.5 to 6.8 per cent and steam, from 6.0 to 3.6 per cent.

The survey was undertaken as a service to heating equipment dealers and distributors serving the Iowa market and to equipment manufacturers.

Try This on Your Editor

Widespread publication of newsworthy facts about warm air heating in editorial columns of newspapers across the country indicates that *indoor comfort* dealers themselves can submit copy which is acceptable for local columns. In less than a year, releases issued by the National Warm Air Heating and Air Conditioning Association have exposed millions of readers to informative material on warm air heating. This has confirmed the universal appeal of heating as an editorial subject in the daily press.

News releases obtainable from the national association may be adapted for local publication by dealer members who will benefit from this type of publicity.

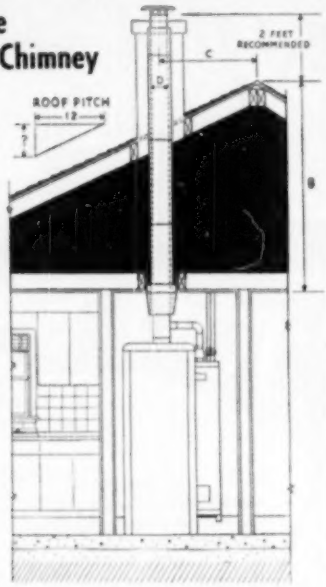
Here is an example of a newsworthy fact issued by the association. Simply type double spaced and substitute your own name and try it on your local editor:

Weatherproof Your House for Greatest Heating Enjoyment

There is no substitute for a weather-tight house in enabling the home owner to achieve wintertime comfort indoors at minimum cost with his heating system. Thus counsels Surewarm Homes of *Indoor Comfort*, Inc., who states that *indoor comfort* conditions are closely related to building construction. The best heating system available can only produce mediocre results in a structure that has been built like a sieve.

Attention SHEET METAL and HEATING CONTRACTORS

The Vitroliner Chimney



• **Complete CHIMNEY** *Installed in 2 Hours* •

for NEW PROFITS!

Now you can render a greater service and make ADDITIONAL profits. At the time you install the Heating Plant you can also install the Vitroliner Type "E" Flue in the modern home as illustrated above. It replaces a masonry chimney and functions as a complete chimney, taking care of all home heating equipment.

Vitroliner is individually designed and completely fabricated to fit the exact roof pitch of the house—no cutting or fitting is required—just assemble handy light weight sections.

This low cost vitreous enameled metal chimney is used nationally by builders and contractors—extensively in F. H. A. Construction. Listed by Underwriters Laboratories.

* For price quotations fill out the four dimensions above.

FEATURES

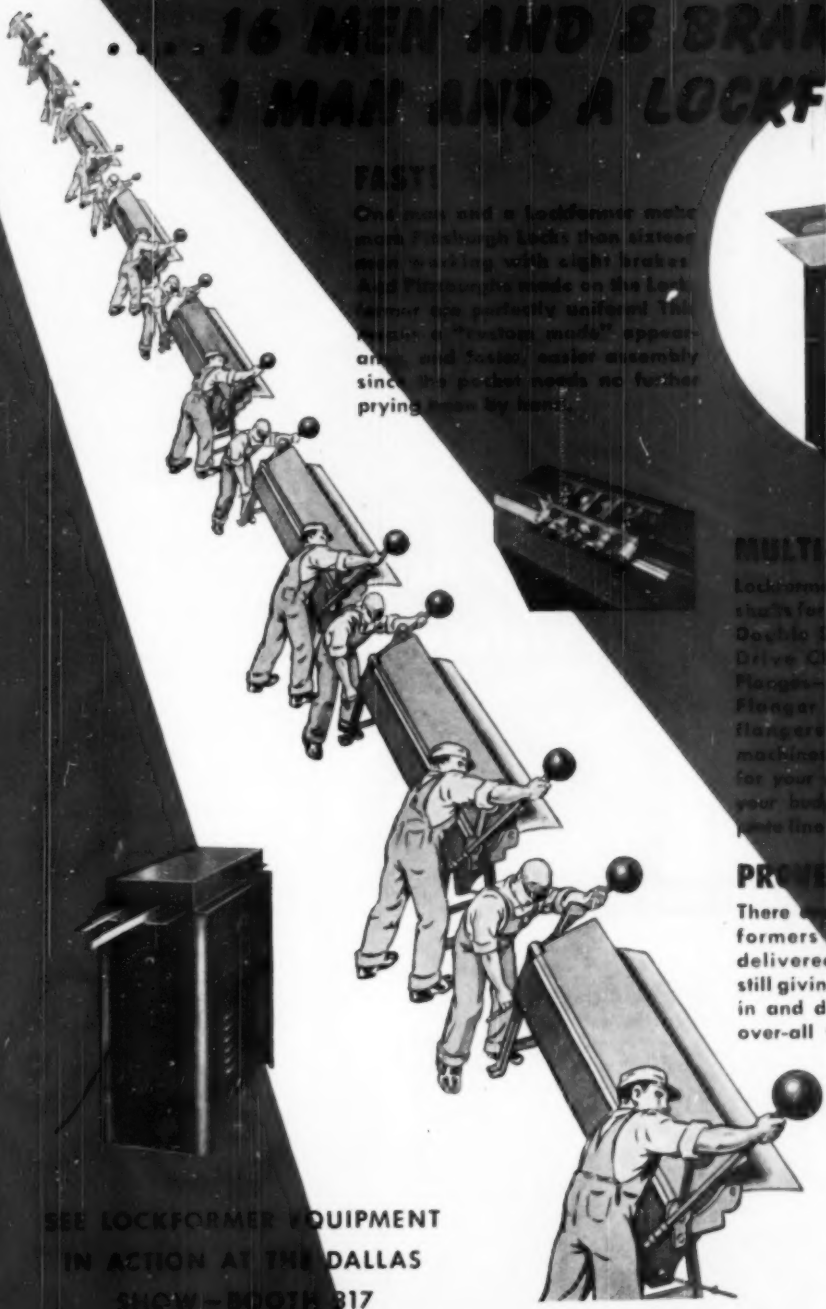
- SAVES VALUABLE FLOOR SPACE
- LOW INITIAL COST
- BUILT OF FINEST MATERIALS
- EASILY INSTALLED IN 2 HOURS
- LIGHT-WEIGHT—10 TO 15 LBS. PER FT.
- IMPROVES HEATING EQUIPMENT EFFICIENCY

Write today for further information

Condensation Engineering Corp.

122 SO. MICHIGAN AVE. CHICAGO 3, ILL.

... 16 MEN AND 8 BRAKES ... OR 1 MAN AND A LOCKFORMER



FAST!

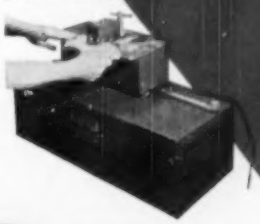
One man and a Lockformer make more Pittsburgh Locks than sixteen men working with eight brakes. And Pittsburgh locks made on the Lockformer are perfectly uniform. The illusion of "factory made" appearance, and faster, easier assembly since the pocket needs no further prying open by hand.

MULTI-PURPOSE!

Lockformers equipped with extended shafts for Auxiliary Rolls also make Double Lemons, Standing Seams, Drive Cleats and Right Angle Flanges—and, if equipped with the Flanger Attachment, are power flangers as well as lock rolling machines. You'll find the right size for your shop at the right price for your budget in Lockformer's complete line of lock-rolling equipment.

PROVEN DEPENDABILITY!

There are more than 17,000 Lockformers in use today. Machines delivered over 12 years ago are still giving trouble-free service day in and day out. Because they cut over-all fabrication costs in half, Lockformers pay for themselves quickly out of the "extra" profits they earn.



SEE LOCKFORMER EQUIPMENT IN ACTION AT THE DALLAS SHOW—BOOTH 317

THE LOCKFORMER CO.

4615 W. ROOSEVELT ROAD • CHICAGO 50, ILLINOIS

the editor's notebook

The home owner who is contemplating how the coming winter season will affect his heating fuel bills will do well to analyze the weatherproof qualities of his house as well as the operating condition of his heating plant. Storm doors and windows, weather stripping and insulation are all important items in protecting the structure against unnecessary heat loss. Tests conducted by the National Warm Air Heating and Air Conditioning Association in its continuous research program sponsored at the University of Illinois have proved that the use of tight storm windows and doors together with overall insulation will help reduce heating costs from one-third to one-half, according to Mr. Homes, a local member of the association.

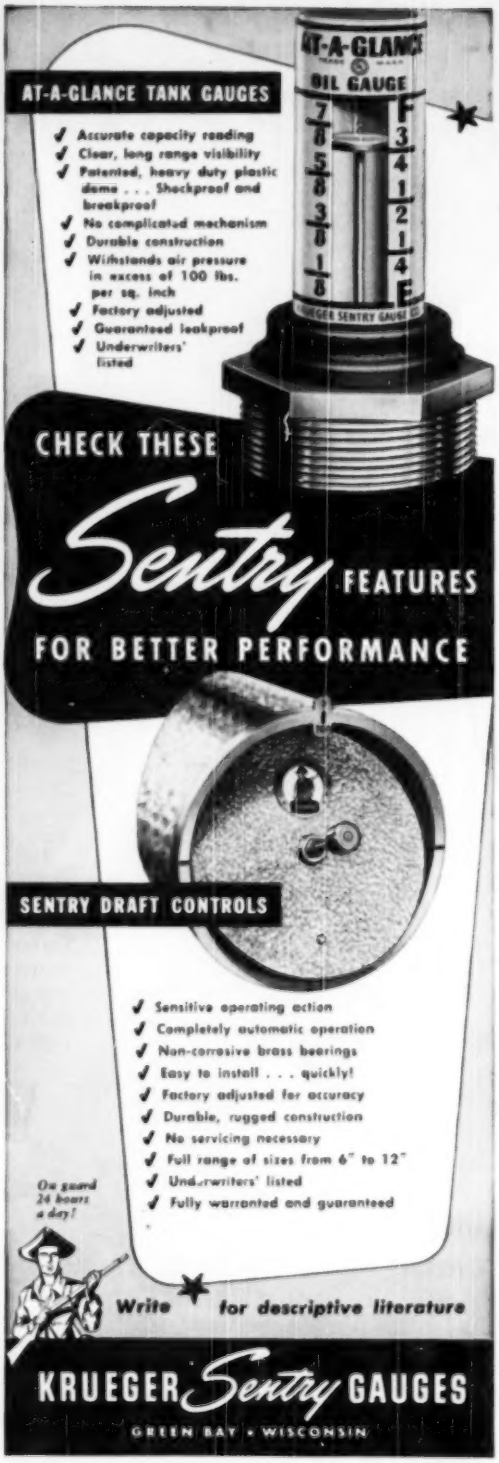
In addition to the economic advantages offered by such weatherproofing methods, the additional comfort advantages are not to be overlooked. Both wall insulation and storm doors make outside walls less susceptible to heat loss, reducing their heat-robbing characteristics. Likewise, wall insulation and storm windows will reduce the velocity and volume of cold air moving over wall surfaces, thereby reducing the amount of airborne dust which always deposits on cold walls. They will also reduce the tendency for cold air to cascade down from windows and walls and settle near the floor.

Storm windows, insulation and weather stripping reduce the amount of cold air that generally leaks into the house around windows and doors and permit the maintenance of higher humidities within the house without frosting the window surfaces. Caulking of window frames, door casings and basement sills reduce leakage of cold air into the house.

Weatherproofing a house generally permits the use of a smaller size heating unit, definitely reduces the heating demands on the furnace, and, as a result, prolongs the life of the heating plant. The advantages of adequate weatherproofing precautions may be summed up by the statement that every additional item of weatherproofing which is incorporated into the house structure is equivalent to moving the house several miles closer to a warmer climate.

Mr. Homes points out that a weatherproofed house served by an inefficient heating system offers the home owner no greater comfort nor savings than the reverse situation. Heating and weatherproofing must go hand in hand. As a result of the great industrial strides which have been made in perfecting modern warm air heating systems, they are now the most comfort producing, economical methods of home heating available to today's home owner. He, therefore, owes it to himself, his family and his pocket book to see that his warm air system is installed in a structure which will enable him to enjoy all the comfort and economy which a warm air system can deliver.

A successful businessman has been defined as one who earns more than his wife can spend.



the editor's notebook

America's First Iron

The first iron made in the United States more than 300 years ago was good iron, somewhat similar to today's product but more brittle, according to an analysis of specimens recently discovered at the foundations of the old furnace in Saugus, near Lynn, Massachusetts.

Excavators and archeologists, who unearthed the furnace foundation a few months ago, have discovered the old plant's shipping wharf, the foundations of a bloomery and forge, and a canal which fed the water wheel from a pond in the Saugus River. Scores of artifacts have been uncovered. The work is being done under the direction of the First Iron Works Association and American Iron and Steel Institute.

The iron which was made at the furnace was extracted from local ores in the blast

Heating contractor explains importance of a Field Barometric Draft Control in overall performance of a heating plant.

LET ACCESSORIES HELP YOU SELL

Sell The Whole

Heating prospects are interested in *total* performance — comfort, convenience, economy, safety. But the overall performance of any heating plant depends upon many component parts and accessories. So, explain, dramatize, SELL these components to your prospects.

Sell The Parts

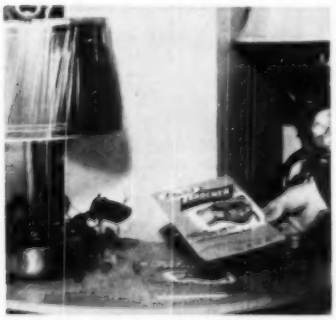
Important heating accessories, fully and intelligently sold, can give your line a real competitive advantage. A draft control, for example, is a vital part of any heating plant — effecting fuel economy, safety, performance, heating plant life. A heating plant is no better than its draft control. A really fine draft control therefore is a component worth stressing in your sales talk. Do the job right and you'll be leaving with the prospect an important reason for buying *your* line — a competitive sales point.

Use Displays, Literature

Typical of the sales helps you can use daily are the posters, literature and counter displays provided with Field Draft Controls. This material provides a simple, but dramatic sales presentation on a very important heating plant component. Keep such material prominently displayed.

Research Means Sales

Manufacturer's research for better heating equipment and methods makes an interesting, colorful sales story — makes the price of a heating plant seem reasonable. Yes, the buyer wants *total* performance, but to sell him, sell your heating plant by parts — and stress how each part adds up to finer service, comfort, economy.



Manufacturers' literature prominently displayed helps you sell important component parts.

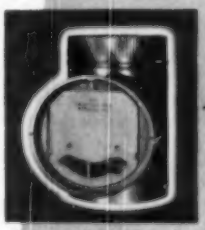
Manufacturers' research makes an interesting story. Photo taken in Field laboratories.

field means finest in DRAFT CONTROLS

. . . . And There's A Field Control For Every Need!

field TYPE M

First and finest for all types of automatic heating equipment.



field TYPE R

First and finest for all types of space heaters and ranges.

field BAROCHEK

First and finest for hand-fired furnaces and boilers, a combination check damper and barometric draft control.

field FUEL SAVING SYSTEM

A newer, finer, more trouble-free damper-motor set with automatic spring return, built-in limit control, "stoke-switch", and booster fan switch.

WRITE for proof of why Field is First and Finest — first choice for the finest in heating equipment.

field CONTROL DIVISION

H. D. CONKEY & CO., MENDOTA, ILL.

AFFILIATES:

Conco Building Products, Inc.
Brick · Tile · Stone

Conco Materials Handling Division
Cranes · Hoists

the editor's notebook

furnace using charcoal for fuel and clam shells and limestone for flux.

The physical structure of the iron as revealed by the microscope does not differ essentially from gray iron castings produced today. Chemically, however, the iron is lower in manganese and silicon and higher in phosphorus than modern iron, conditions which made it more brittle and less strong.

Among the many artifacts which have been uncovered are wrought iron nails, bolts, wedges or chisels, a mattock head, large spikes, scale weights and parts of cast kettle rims. Many other odd pieces have been discovered, the use of which is presently unknown. Buried with the artifacts in such a manner as to prove they were contemporary with the operation of the furnace were an Indian arrow head, the skull of a wolf, a pig's jawbone and part of the skeleton of a cow. Mystery is supplied by pieces of coral of the type found around the Florida keys.

Never hit a man when he is down—he may get up!

Letters From Readers

◖ It is with a great deal of surprise that I find you have resorted to . . . subterfuge in order to gain circulation. I refer you specifically to the article How to Figure Old Age Benefits (November 1949). The article is well set up to catch the eye, with an elderly gentleman relaxing in a boat while an Indian guide obviously does all the work. I became quite interested in this article on seeing this enticing picture.

Model A-2

Sundstrand All Electric OIL BURNER

Model B-4

A COMPLETE LINE

. . . finding buyer confidence the country over

Nearly thirty years a leader in the oil burner field—consistent national advertising in the national home magazines—and the reputation of an oil burner that lives up to its expectations has made the name Sundstrand a salesman in its own right. A complete line known by your customers is a line you'll want to handle.

For Further Information, Write

SUNDSTRAND ENGINEERING CO.

Rockford • Illinois

the editor's notebook

I, too, wanted to know how to figure old age benefits so that someday I could be in the middle of a canoe. I struggled through the first two pages and then it suddenly dawned on me that I might not be around when I am 65. It made me wonder who is going to get this money that the government has so carefully shepherded for me through the years.

Knowing that AMERICAN ARTISAN had all the answers, I finished reading the second page and was promptly left dangling in mid-air. This diabolical scheme of yours has acted on me as I am sure it will act on most of your readers and I am feverishly waiting for the next issue so I can find out what happens to the children of a deceased worker . . .

A disappointed reader.

DON ROSSITER
Inland Steel Products Co.
Cleveland, Ohio.

P.S. I wish you a MERRY CHRISTMAS!

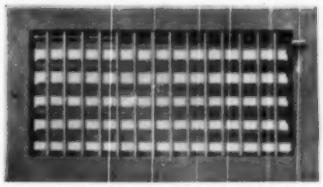
Had we known this article—staff written—would arouse the interest of a western thriller, we would have published it in two installments, as a subterfuge to gain circulation.

Here we were, hoping that our efforts would be realistic enough to enable many of our readers to envision themselves in the middle of that canoe. Looks like we left some in mid-air—or mid-stream.

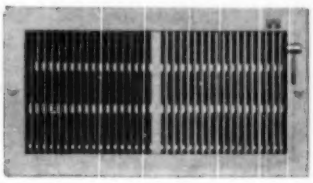
The diabolical scheme was to cause readers to rummage through the advertisements. The crux of the scheme was to drop the continued line. Please turn to page 154.

All of which goes to show

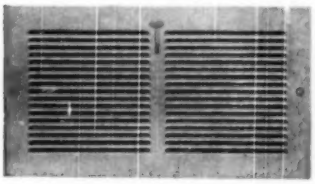
Auer has a Complete Line of REGISTERS and GRILLES for all Your Needs



No. 1005V-HML—Streamliner Register with single bank of vertical bars, multi-louvre shutters



No. 4432—Airo-Flex Multi-valve Register—4-Way Directional



No. 7032—Airo-Flex Single Valve Register—Adjustable Fins

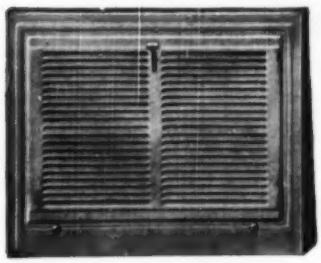
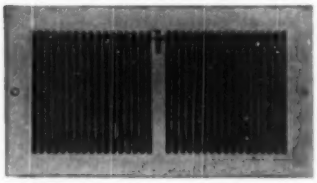


Fig. H-800—Heat-Rite Baseboard Register

Auer

For high velocity outlets, Auer "Streamliner" registers and grilles are unsurpassed, affording a wide range of directional variations. Streamliner models are made with either single bank or double bank of pivoted adjustable bars (vertical or horizontal), and either with or without multi-louvre control valve. Adjustable air conditioning registers and intakes for wall or base come in many styles with single or multi-louvre valves, typified by our 4400, 4000, and 7000 Series. Gravity registers and returns are offered in several types, featuring our popular Heat-Rite model. DuraBilt floor registers and intakes, of heavy cross bar construction, are used wherever extra strength is required. Another specialty of ours is perforated metal grilles for ventilation, concealment, etc., in many designs, in sizes to order, and of all usual materials.

With such top quality products, all moderately priced, available from one source, why not rely on Auer for *all* your needs? Genuine Auer Registers are made ONLY by The Auer Register Co.



No. 4032—Airo-Flex Single Valve Register—Adjustable Fins

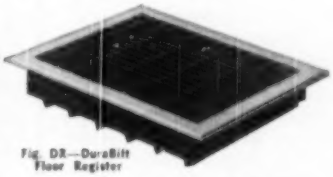
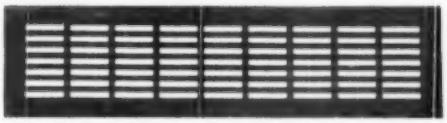


Fig. DR—DuraBilt Floor Register



No. 31A—Perforated Grille

Fig. CC1—Push-in Clothes Chute Door

Ask for complete Auer Register Book, or special Grille Catalog "G" on perforated grilles.

THE AUER REGISTER COMPANY

3608 Payne Ave. Cleveland 14, Ohio

Canadian Distributor, Marchand Furnace, Ltd., Tilbury, Ont.

Auer REGISTERS & GRILLES for AIR CONDITIONING & GRAVITY

the editor's notebook

there is many a slip between the cup and the lip, in the Editorial Department.—ED.

P.S. We wish you a HAPPY NEW YEAR!

¶ I would like to obtain data on gas heating using liquified petroleum gas. We are in a rural section and would like to know if this fuel is practical from a cost standpoint. We feel there should be a demand for liquefied petroleum, provided operating costs are not out of reason.

If you do not have this information available, perhaps you can refer us to someone who does.

CHARLES E. GILL
Harford Sheet Metal Contractors
Fallston, Md.

In round figures, LP gas mixtures will average about 100,000 Btu per gallon and fuel oil about 140,000. In a locality where fuel oil is delivered for (say) 14 cents per gallon, LP gas would have to be delivered for 10 cents in order to compare on a Btu basis.—ED.

¶ In your letter . . . answering my complaint (EDITOR'S NOTEBOOK, August 1949), you informed me: "We will gladly supply extra pages from any issue you request. This will allow you to file complete articles."

I therefore ask you to kindly supply me with three copies each of the following articles:

Electronic Control Systems, Edwin F. Snyder, Parts I, II, and III, published in the June, July, and November 1949 issues.

Heating Basementless Homes with Warm Air, S. Konzo, all installments published to date, including the November issue.

You can see in the November issue that the Snyder and Konzo articles were published in part on one page, the cause of my complaint.

There is no indication about the conclusion of the series. If they are not yet finished and will be reprinted, I will wait; please advise.

WALTER OTTO
W. Otto Bros. Maintenance Co.
Forest Hills, N. Y.

Both series were completed in the November issue.

Reprints of Electronic Control Systems may be obtained by writing the author at Minneapolis.

Reprints of Heating Basementless Homes with Warm Air, a treatise on the perimeter panel system by S. Konzo, W. R. Hedrick, and J. M. David, will soon be available. Readers who wish copies may place their names on file. Address the Circulation Department.

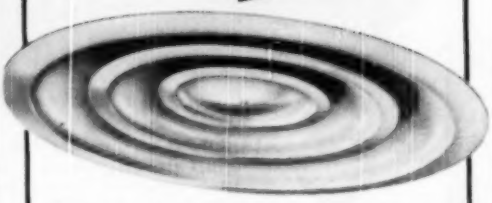
Reprints of the series Correct Practice in Oil Heating, by J. J. Mirabile, are now available. Copies are now being mailed to a long list of names on file. This manual which outlines all phases of oil burner installation procedure may be ordered from our Circulation Department, $1 per copy.—ED.

People who believe in luck find that the harder they work, the more they seem to have.

Address the editors
6 North Michigan Avenue
Chicago 2, Illinois.

BARBER COLMAN

New!



Model "J" CEILING OUTLETS

All the performance characteristics of previous designs—PLUS—ADJUSTABLE AIR PATTERN. The new Model "J" VENTURI-FLO Ceiling Outlets are engineered to exacting specifications for superior performance. Write for Bulletin F-4085 or see your Barber-Colman representative.

INTEGRAL PATTERN ADJUSTMENT
- LOW NOISE LEVEL
- LOW PRESSURE DROP
- ENGINEERED FOR COMFORT CONDITIONING
- FLUSH MOUNTING
- SUPPLY AND EXHAUST
- COMPLETE RANGE OF SIZES

BARBER-COLMAN COMPANY
1226 ROCK STREET • ROCKFORD, ILLINOIS

NATION-WIDE SALES AND ENGINEERING SERVICE

Call

Wolff Metal Service

for

Galvanized Sheets

and galvannealed too.

You can get delivery *Now*

WAlbrook 5-3200

Milwaukee Phone DAly 8-3832

For 33 years Wolff has specialized in the warehousing of galvanized and galvannealed sheets. Again you can call on this resourceful warehouse to supply you with prime sheets in the standard gauges and sizes that you need.

If you know Wolff at all, you know that here is an organization that has grown, and is still growing, for one basic reason . . . because it provides industry with a service in metals that always puts the customer's interest *first*.

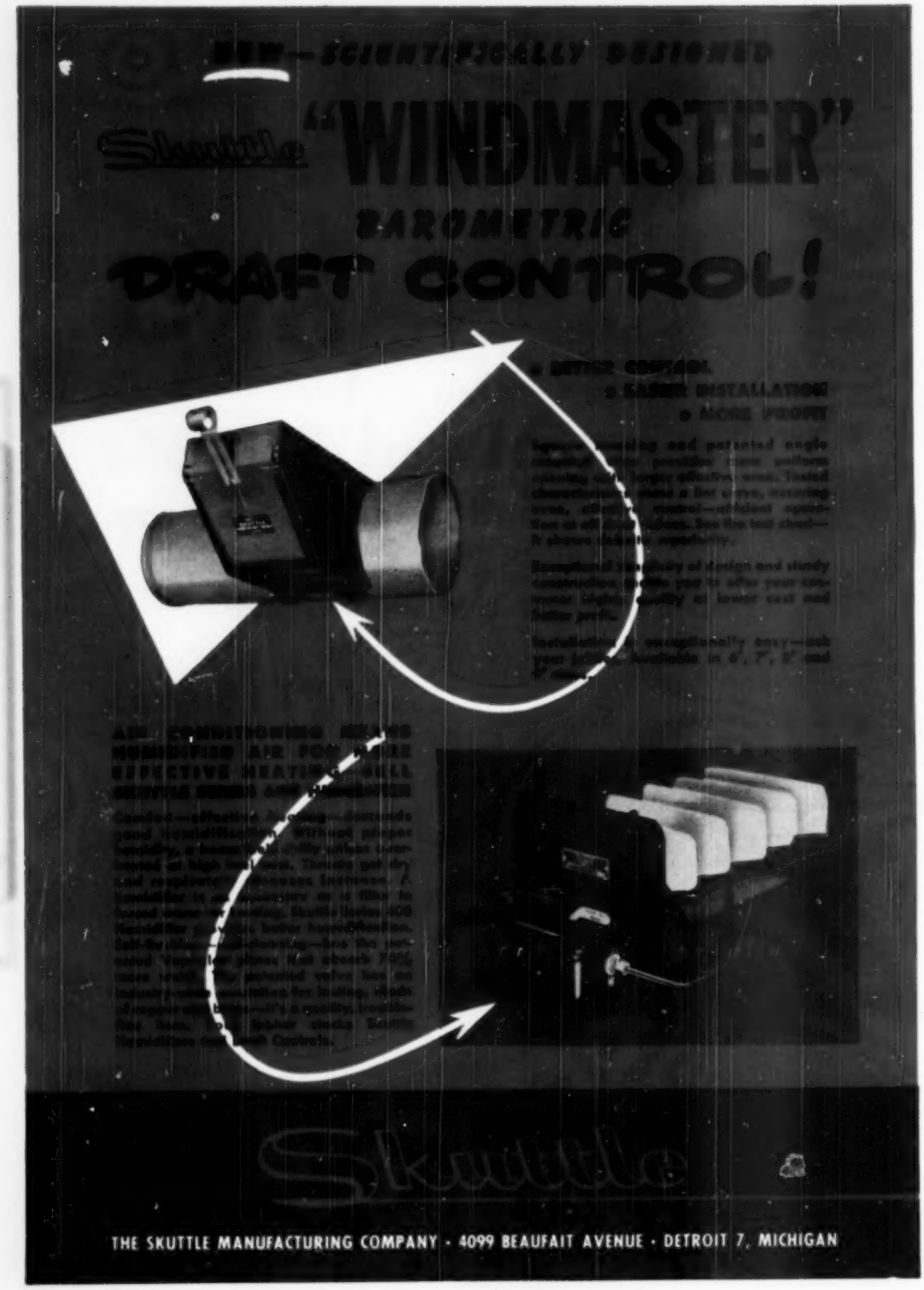
So call today for your requirements in galvanized, galvannealed and all of the other merchant metal products that Wolff has on the floor for you.

Carbon Steels, Stainless Steels, Aluminum, Copper, Tin Plate, Metal Decorating

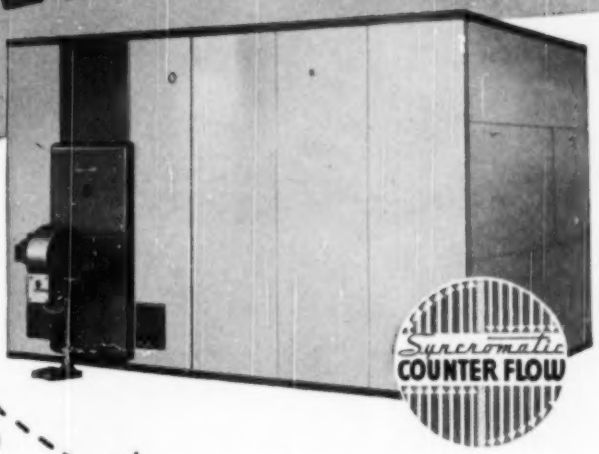
BENJAMIN WOLFF & COMPANY

General Office and Warehouse: 3800 South [illegible] Avenue, Chicago 36, Ill.

Wisconsin Office — [illegible] Avenue, Milwaukee 3, Wis.


NEW—SCIENTIFICALLY DESIGNED
Skuttle "WINDMASTER"
BAROMETRIC
DRAFT CONTROL!
THE SKUTTLE MANUFACTURING COMPANY · 4099 BEAUFAIT AVENUE · DETROIT 7, MICHIGAN

from



TO

60,000 B.T.U's **1,000,000 B.T.U's**

For OIL • GAS or COAL

SYNCROMATIC

CAN FILL YOUR NEED AND GIVE THE SAME HIGH OPERATING EFFICIENCY REGARDLESS OF SIZE. IN ALL SYNCROMATIC UNITS YOU GET THE SAME HIGH QUALITIES AND EXCLUSIVE FEATURES IN COUNTERFLOW DESIGN AND HEAT TRANSFER.

Syncromatic **offers you**

1. **EXCLUSIVE PATENTED COUNTERFLOW DESIGN.** Produces efficiencies over 80% for all fuels.

2. **STURDY UNEQUALLED FURNACE CONSTRUCTION.** No heat exchanger lighter than 10 Gauge steel insures long operating life. **UNUSUAL FLEXIBILITY** in conversion.

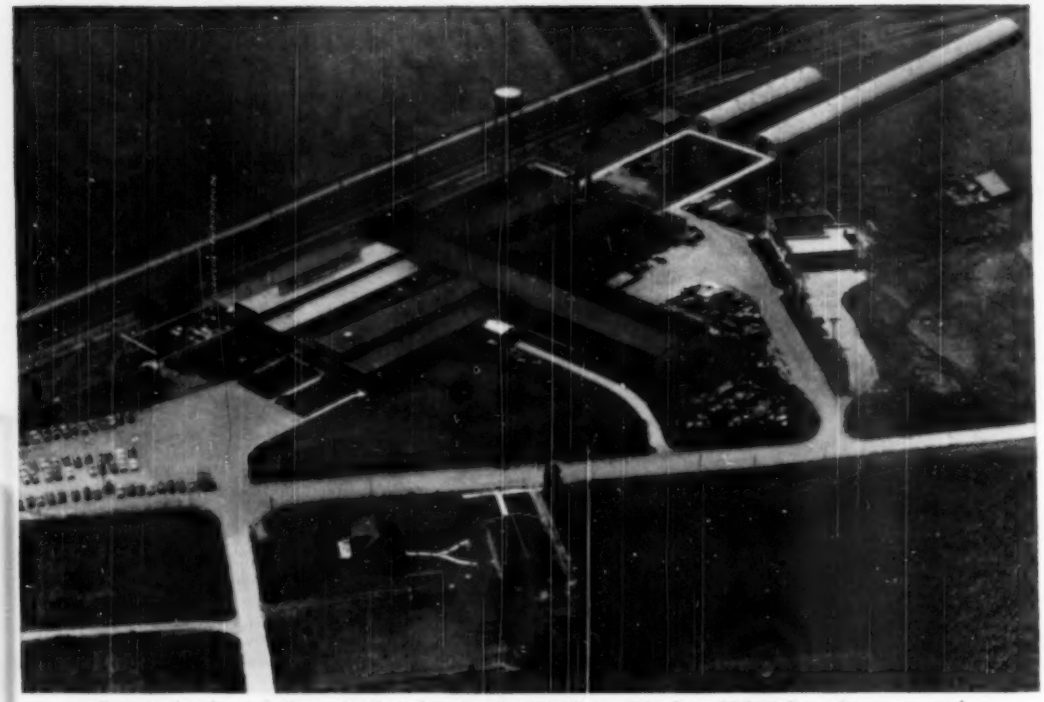
3. **EASE OF INSTALLATION.** Whether large or small **SYNCROMATIC** has been designed to meet the installers problems to save time and needless expense.

4. **PERFECTION IN COMBUSTION.** Because of **SYNCROMATIC'S** unusual smooth flowing heat trap counterflow design it is not necessary to restrict combustion gases in manner resorted to normally to obtain high overall efficiency. As a result in spite of high efficiency **SYNCROMATIC** does not experience combustion problems resulting from internal restrictions. **ANY** good gun type high pressure or low pressure oil burner can be adapted to **SYNCROMATIC** oil fired furnace.

5. **PRICED COMPETITIVELY.** In spite of high quality heavy construction **SYNCROMATIC IS PRICED COMPETITIVELY** for today's market.

Syncromatic Corporation

WATERTOWN, WISCONSIN



Recent air view of Conco Engineering Works, Mendota, Illinois, which offers the space and equipment for fully integrated manufacturing of heating equipment. Conco was among the earliest entries in the field of automatic heating equipment.

"Convertibuilt" Series Heads Conco's '50 Line

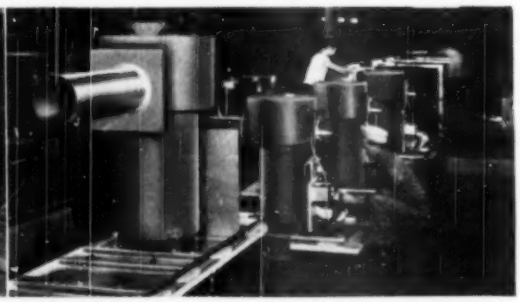
The Conco Engineering Works, Mendota, Illinois, is heading up its 1950 heating line with a full series of dual-design furnaces built to accept gas or oil-firing with equal efficiency. Units in the new series will be known as "Convertibuilts", and will carry full U.L. listing and A.G.A. approval.

Reflecting the growing popularity and availability of gas, this new series will stress the freedom of fuel offered by the "Convertibuilts" — fully approved, highly efficient oil firing, fully approved, highly efficient gas firing — an easy, economical change from oil to gas, providing in this latter case, not a "converted" furnace, but an efficient, A.G.A. approved installation. This is, of course, possible because the "Convertibuilts" were originally designed to burn gas as efficiently as oil.

Broad Market Coverage

The "Convertibuilt" series is designed to provide broad market coverage, and includes several models. The oil-fired lo-boy conditioners in the

Conco "Convertibuilts" go down the gas line in the Conco factory at Mendota, Illinois. Workman in the foreground is installing gas burner.



Assembly sequence on oil-fired "Convertibuilt" conditioners is shown by the above photo taken at plant of Conco Engineering Works, Mendota, Illinois.

new M-1 models are available in two capacities — 80,000 and 105,000 BTU at the bonnet. A third size will be announced soon. Gas-fired lo-boys in the G series models are available in four capacities — 65,000, 80,000, 100,000 and 124,000 BTU at the bonnet. For oil firing, the conditioners are equipped with the famous Conco Magic Spray pressure atomizing burner; for gas firing, the Conco Monoflame gas burner (Manufactured under Roberts-Gordon Patent No. 2,183,836) is used.

"Convertibuilt" Hi-Boys

The new M and G series mentioned above also includes a hi-boy model that provides 80,000 BTU at bonnet with either oil or gas. These are compact units designed so that they can be installed with less than standard clearances.

New Counter-Flow Model

For the small homes market, a new "Convertibuilt" counterflo hi-boy, the "Ranchief" has ben introduced. This new conditioner is designed for under-floor heating in basement-less homes and features extreme compactness — in size, 22" x 22", with zero clearance to combustible material, and with a top flue outlet.

Oil-fired with a Conco stainless steel vaporizing burner, the "Ranchief" produces 64,000 BTU at the bonnet; gas-fired it has the identical capacity of 64,000 BTU at the bonnet. The new "Ranchief" is engineered for U.L. listing for oil, and A.G.A. approval for gas.

Complete Line Offered

In addition to the "Convertibuilt" models the company is building a variety of standard models to round out a complete line of oil, gas and coal-fired heating equipment.

The "Ranchief," new "Convertibuilt" counter-flow hi-boy, just introduced, shown in the Conco laboratory where it has been under exhaustive test for nearly a year.

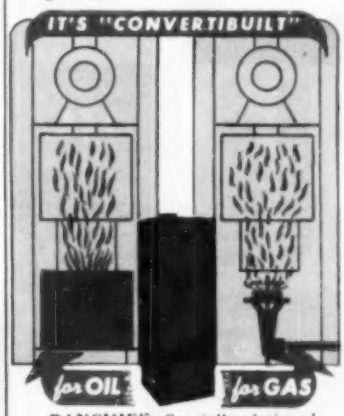
CONCO heat

CONCO's Stepping Out with CONVERTIBUILTS

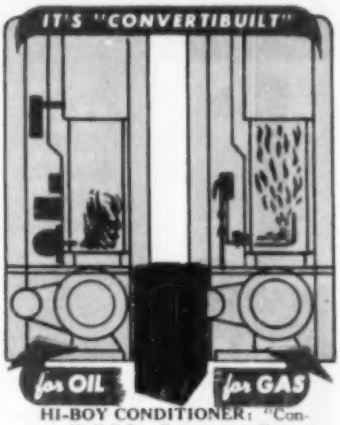
BUILT FOR OIL, FOR GAS...NOW OR LATER

SERIES M OIL: Fired with the Magic Spray Burner it forms the M series of Oil-Fired Conditioners in two capacities—80,000 and 105,000 BTU at bonnet. Carries both U.L. and A.G.A. approval as a permanent oil installation, or oil now, gas later.

SERIES G GAS: Fired with a Conco Monoflame Gas Burner, as an original or ultimate gas installation, it carries full A.G.A. approval and forms the G series Conco Gas Conditioners in four capacities — 81,250, 100,000, 125,000 and 155,000 BTU input.



RANCHIEF: Specially designed "counterflo" Hi-Boy for under-floor heating. "Convertibuilt" for oil or gas, or oil now, gas later, with full U.L. and A.G.A. approval. Oil-fired capacity, 64,000 BTU at bonnet. Gas-fired capacity, 64,000 BTU at bonnet. Compact, powerful.



HI-BOY CONDITIONER: "Convertibuilt" for oil or gas, or oil now, gas later, with full U.L. and A.G.A. approval. Oil-fired with Magic Spray Burner provides 80,000 BTU at bonnet. Gas-fired with Monoflame gas burner provides 100,000 BTU input.

Step Out with CONCO

CONCO ENGINEERING WORKS
Division of H. D. Conkey & Co., Mendota, 1, Illinois.

Rush me full information on the CONCO-HEAT line and franchise.

My name _____

My address _____

_____

...get out of the Competitive class with

VICTOR

The many exclusive features of *genuine merit* take you out of the competitive class . . . yet the VICTOR gas, oil and coal line is competitively priced. There are nearly 100 VICTOR models to fit every installation job, large or small. It's a line you'll be proud to sell . . . a line that will make you more money in '50 because there's more profit in an exclusive VICTOR franchise.

VICTOR **GAS** Series J LOW-BOYS and HI-BOYS

THE FURNACE WITH HEAT RADIATING **FINS**

The Victor Tubular-Fin Heat Exchanger Gives Extra Heat

VICTOR **OIL** Series 26 *(left)* Series R *(right)*

VICTOR **OIL** Series K HI-BOYS *with* Vaporizing Burners

VICTOR **OIL** Series R HI-BOYS *with* Gun Type Burners

VICTOR **COAL** *DeLuxe* Series F • *Square Casing*

VICTOR **COAL** *DeLuxe* Series F • *Round Casing*

VICTOR **COAL** Series C • *Square and Round Casings*

VICTOR **COAL** Series M • *Square and Round Casings*

Investigate **VICTOR** *– Write Us. Today*

GAS • OIL BURNERS • STOKERS • BLOWERS • FITTINGS • ACCESSORIES

VICTOR **HEAVY DUTY** *for* Gas, Oil or Coal

HALL-NEAL FURNACE CO.

VICTOR *Quality Furnaces Since 1890*

1322-1326 N. CAPITOL AVENUE • INDIANAPOLIS, IND.

BUILT-IN LUBRICATION

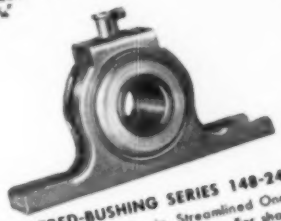
keeps shafts running smoother, quieter, longer on Randall Pillow Blocks

You get *double* protection when you specify Randalls. *First*, these precision bearings have self-lubricating bushings, either graphited phosphor bronze or sintered bronze. *Second*, the self-aligning housings have big oil reservoirs, packed with SAE No. F-11 wool felt.

Even if lubrication is neglected, Randalls can roll along dependably for a long, long time.

The oil-saturated graphite or sintered metal continues to feed lubrication to the bearing surface, keeps the equipment running almost frictionless. The graphited bushings assure spectacularly longer service. The graphite alone will keep the shaft rolling quietly, long after the oil supply is completely exhausted.

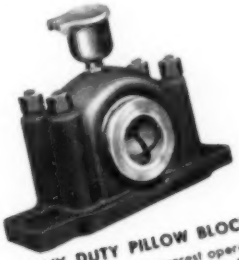
ONE-PIECE STEEL HOUSING PILLOW BLOCK
Double-lubricated, with graphited phosphor bronze bushing. Mounts in any position. For shafts 1⅛" through 1⅞"



SINTERED-BUSHING SERIES 148-248
Sintered bronze bushing in Streamlined One-Piece Steel Housing. Mounts in any position. For shafts ⅝", ¾", 1⅛", and 1"

These are the six basic pillow block types in the complete Randall Line. Sizes range from ½" through 3¹⁵⁄₁₆".

STREAMLINED ONE-PIECE STEEL HOUSING PILLOW BLOCK
Housing formed around self-aligning ball to permit maximum air flow. Double-lubricated, with graphited phosphor bronze bushing. Mounts in any position. For shafts ½" through 1"



HEAVY DUTY PILLOW BLOCK
Designed and built to meet severest operating conditions. Double lubricated, with graphited phosphor bronze bushing. Mounts in any position. For shafts ½" through 2⅞"

FLANGE or SIDE MOUNT PILLOW BLOCK
Built for the most exacting heavy duty service. Double lubricated, with graphited phosphor bronze bushing. This model is widely used in unit heaters, cabinet type air conditioning, and similar units. Side mounting only. For shafts ½" through 1⅛"

There's a Randall that's right for every air handling need . . . and you can afford the right Randall. Write for the complete story of Randall design and the Randall Line. Ask for Catalog 49

NORMAL DUTY PILLOW BLOCK
A general service pillow block for normal duty on small shafts, for heavier service on larger shafts. Double lubricated, with graphited, phosphor bronze bushing. For shafts 1¼" through 3¹⁵⁄₁₆"

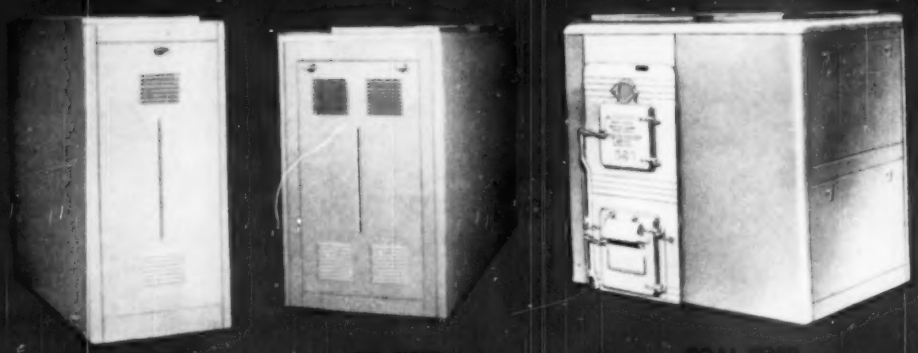
AT DALLAS...be sure to visit our display in Space 219

RANDALL GRAPHITE BEARINGS, INC.

609 WEST LAKE STREET, DEPT. 111 . CHICAGO 6, ILLINOIS

MAYFLOWER

The Name of Distinction IN WARM AIR HEATING



GAS FIRED OIL FIRED COAL FIRED

A complete line, competitively priced, for GAS, OIL and COAL

MAYFLOWER AIR-CONDITIONERS, INC. • St. Paul 6, Minn.

Let AIR POWER

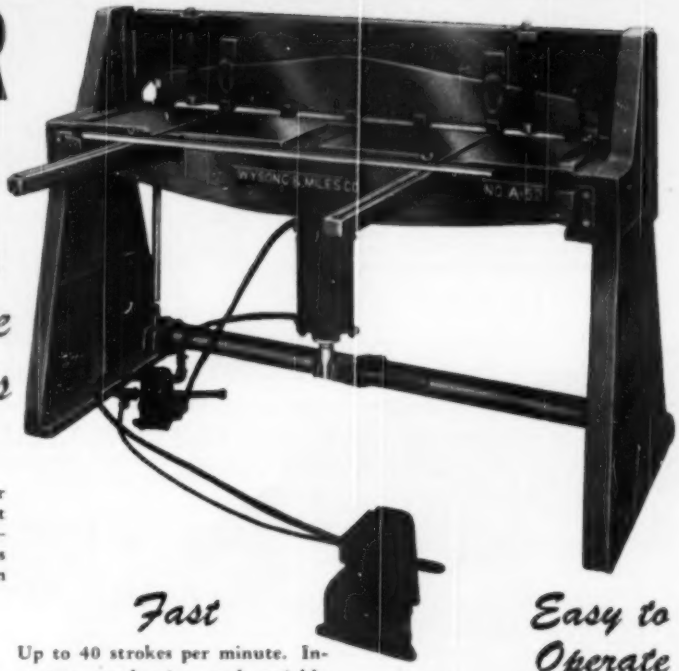
SHEAR

DOLLARS, DOLLARS

$ $ $ $ $ $ $

AND MORE DOLLARS

from your time and labor costs



Inexpensive

A fast, accurate, air power shear costs but little more than a foot power shear of the same capacity—approximately $200 on shears of less than 10 ft. x 18 ga.; slightly more on the 10 ft. model.

Accurate

Rigid, cast iron construction maintains alignment and helps prevent twist, spring or deflection. Accurate gauges—front, back and side—plus embedded steel scale make positioning of stock quick and easy. More accurate blanks, less waste.

Automatic Holddowns

Positive, spring actuated holddowns clamp stock firmly. Save time and effort.

Economical

FOUR EDGE BLADES

May be turned for use of each edge before sharpening is necessary.

Fast

Up to 40 strokes per minute. Increases production and quickly pays for itself through savings of labor costs.

Easy to Operate

Simply depress the valve treadle to make a cut, release to return the knife bar to its top position.

A Wysong and Miles Shear requires only 75 to 85 pounds Cylinder Pressure. A single stage, 1 to 2 H.P. air compressor provides sufficient power.

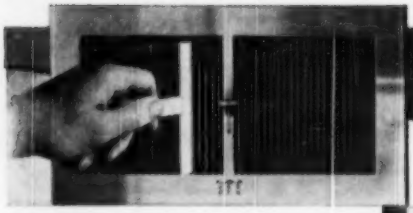
MACHINE	CAPACITY	CUTTING	PRICE
No. A-36	16 Gauge	Up to 36"	$ 468
No. A-42	16 Gauge	Up to 42"	520
No. A-52	16 Gauge	Up to 52"	590
No. A-72	16 Gauge	Up to 72"	830
No. A-96	18 Gauge	Up to 96"	1090
No. A-120	18 Gauge	Up to 120"	1665

SEE YOUR DEALER OR WRITE **AIR POWER DEPARTMENT**

WYSONG and MILES Co.

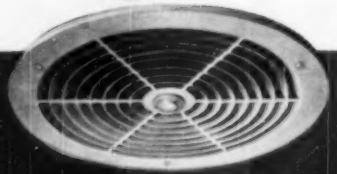
GREENSBORO, NO. CAROLINA

Only H & C gives

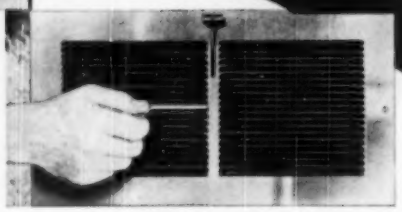


No. 75

For Air Conditioning at its best. The only register with the INCOMPARABLE TURNING BLADE VALVE.



H&C Ceiling Outlet — Neat, trim and efficient. Available in 5 popular sizes.

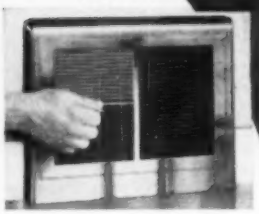


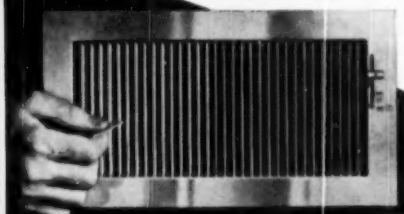
No. 74

A low-cost, high quality Air Conditioning register to meet price competition without sacrificing customer good will.

Reg
tops fo
ity or
version jo

No. 130



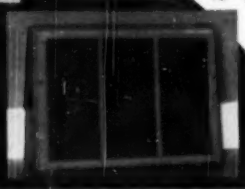


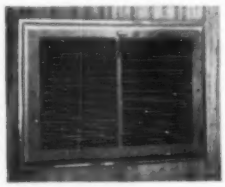
No. 88

Air Conditioning, Multi-shutter Registers and Grilles. Adjustable bar face. Sturdily constructed. Available in standard sizes thru 30 x 24.

Baseboard Return Air Intake—has 4" projection. 14 x 10 size adequate for 12" pipe (gravity).

No. 603





No. 330

Sidewall Register — companion to the No. 130.

No. 623

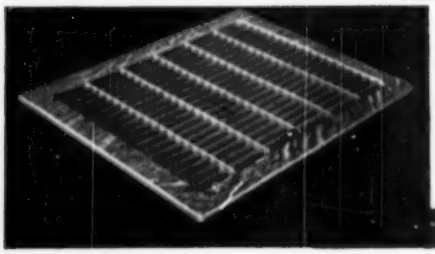
Baseboard Intake for installations where height of baseboard is less than that of intake.

No. 653

Baseboard intake for installations where height exceeds that of intake.

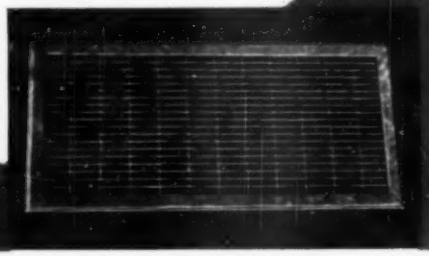
No. 265

"NO-FLEX" Return Air Intake — matches the No. 210. Large free area.

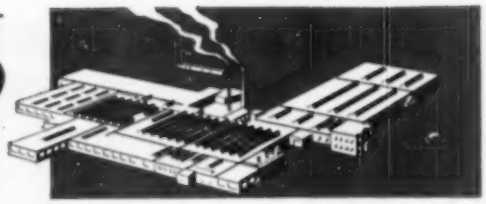


No. 210

"NO-FLEX" Floor Register — close mesh, exceedingly sturdy, one-piece margin, attractive appearance.



you all 6



1 PERFECT-FUNCTIONING REGISTERS OF THE HIGHEST QUALITY CONSTRUCTION AND WORKMANSHIP KNOWN TO THE INDUSTRY.

2 THE IDEAL REGISTER FOR EVERY TYPE OF INSTALLATION available from a single source.

3 PACKAGING THAT COUPLES PERFECT PROTECTION TO THE POINT OF USE, WITH MAXIMUM CONVENIENCE TO BOTH JOBBER AND INSTALLER. Each item is individually packed in cartons or wrapped; shipped in tough fibre containers in quantities small enough to be easily handled and shelved, convenient for the trade to buy in case lots.

4 A COMPLETE LINE OF FURNACE ACCESSORIES. Manual Furnace Regulator Sets, Damper Regulator Sets, Dampers, Damper Clips and Tips, Furnace Pulleys, Chain and Casing Clips.

5 WHOLEHEARTED COOPERATION on the smallest as well as the largest orders.

6 PROMPT SHIPPING SERVICE ON MOST STANDARD ITEMS

We honestly believe that like thousands of others, you, too, will find

IT'S MORE PROFITABLE, MORE CONVENIENT and MUCH MORE SATISFACTORY TO DEAL WITH

H&C

Current Catalog is No. 49. Write for free copy of our "Pocket Guide" — 8th Edition.

HART & COOLEY MANUFACTURING COMPANY
500 Eighth St., HOLLAND, MICHIGAN

WORLD'S LARGEST MANUFACTURERS OF REGISTERS, GRILLES AND FURNACE ACCESSORIES
IN CANADA: HART & COOLEY MANUFACTURING CO., FORT ERIE, N. ONTARIO

THE MOST COMPLETE LINE IN THE INDUSTRY

FOR GAS

Type 101 Gravity Furnace — Steel. For small and medium-size homes. Two sizes, 90,000, 135,000 Btu input.

Type 102 Winter Air Conditioner — Steel. "Heat-Speeder" sectional heat-exchanger design. Two sizes, 180,000, 225,000 Btu input.

Type 103 Forced Air Furnace — Steel. "Heat-Speeder" sectional heat-exchanger. For large residences, apartment houses, and commercial installations. Eight sizes, 225,000-540,000 Btu input, in increments of 45,000 Btu.

Type 105 Winter Air Conditioner — Steel. Type 101 plus built in blower-filter unit. Shown with Mueller Lzvelizer Control System. Two sizes, 100,000, 150,000 Btu input.

Type 155 (Attic) Furnace — Steel. Forced-air. Can be suspended in basements. Two sizes, 60,000, 90,000 Btu input.

Type 10 Boiler — For radiator or radiant heat, and hot water supply in residences and small commercial or industrial installations. Nine sizes, from 54,000 to 578,000 Btu input, in increments of 27,000 Btu.

Type 11 Boiler — Same as Type 10 except that controls are not enclosed in outer cabinet. Gross output 290-2015 sq. ft. radiation for hot water, 180-1260 sq. ft. radiation for steam.

Type 20 Boiler — for steam, hot water, or vapor heat in large residences, and commercial and industrial jobs. Sectional construction for battery installations. Forty-one sizes, 315,000-3,780,000 Btu input, in Btu increments of 63,000 capacity.

Type 500 Conversion Burner — Designed for quick, easy installation to convert coal — and oil-fired units. Four sizes, 125,000, 175,000, 225,000, and, 275,000 Btu input. Easily adjusted for proper capacity.

FOR COAL

FOR OIL

Type 50 Winter Air Conditioner — Steel. For residential and commercial installations. Pressure-atomizing burner. Four sizes, 100,000, 150,000 200,000, and 225,000 Btu output

Type 201 Gravity Furnace — Steel. For small and medium size homes. With pressure-atomizing or vaporizing burner. Two sizes, 90,000, 135,000 Btu input.

Type 202 Winter Air Conditioner—Steel. Type 201 plus forced-air circulating and filtering unit. Two sizes, 100,000, 150,000 Btu input.

Type 209 Winter Air Conditioner — Steel. Vertical installation. Blower assembly mounted in exclusive Roll-a-Drawer. Two sizes, 100,000, 135,000 Btu input.

Type OH-57 Unit Heater — For industrial applications. Pressure-atomizing burner. One size, 250,000 Btu output.

Year 'Round Air Conditioning

Type 900 Condensing Unit And Coil — For installation in standard forced-air heating systems. Two sizes — 3 and 5 tons.

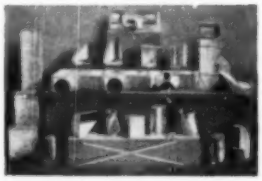
Type 901 Summer Air Conditioner — For installation with Type 105 Gas-fired, and Type 202 Oil-fired Winter Air Conditioners. By-pass damper. Sizes: 3 and 5 tons.

Other Mueller Climatrol Equipment

Blower-Filter Unit — In wide range of sizes for heating, ventilating, air-conditioning, and processing applications.

Automatic Humidifier — For installation in hood of any size or make of warm air furnace.

Furnace, Pipe, Duct and Fittings—Complete line for both gravity and forced-air installations. Special patented fittings.



THE MOST COMPLETE LINE IN THE INDUSTRY

THE MOST COMPLETE LINE IN THE INDUSTRY ★ THE MOST COMPLETE LINE IN THE INDUSTRY

THE MOST COMPLETE LINE IN THE INDUSTRY

Type 106 Gravity Furnace — Cast iron. Vertical design for space-saving installation in small and medium-size homes. Two sizes, 65,000, 85,000 Btu input.

Type 108 Winter Air Conditioner — Cast iron. The blower-filter cabinet can be installed on either side of the heat-exchanger cabinet. Five sizes, 67,500-157,500 Btu input, in increments of 22,500 Btu.

Type 109 Winter Air Conditioner — Steel. Vertical cabinet for space-saving installation. Blower assembly mounted in exclusive Roll-a-Drawer. Two sizes, 100,000 and 135,000 Btu input.

Type 110 Winter Air Conditioner — Steel. Vertical design. For small homes, multi-family apartments. Three sizes, 60,000, 80,000, and 100,000 Btu input.

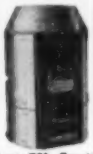
Type 111 Gravity Furnace — Steel. For small and medium-size homes. One size, 90,000 Btu input.

Type "UH" Unit Heater — Space heating unit for factories, warehouses, hangers, shops. Nine sizes, 180,000-540,000 Btu input, in increments of 45,000 Btu.

Type 150 Unit Heater — Steel. Suspended type. Horizontal, tubular welded heat exchanger. Four sizes, 60,000, 90,000, 120,000 and 150,000 Btu input.

Type "F" Gravity Furnace—Cast iron. Five sizes — from 20" to 50" firepots. Also furnished with square casings. 95,900-177,000 Btu output.

Type "FB" Winter Air Conditioner—Cast iron. Type F and blower-filter unit combined in one cabinet. Five sizes — 108,700-234,000 Btu output.



Type 701 Gravity Furnace — Steel. Five sizes: 20", 22", 24", 27", 30". Also available in square, green lacquer cabinet.

Type 702 Winter Air Conditioner — Steel. Type 701 and blower-filter unit combined in one cabinet. 109,000-210,000 Btu ouput.

Type "WG" Gravity Furnace — Cast iron. For small, compact home. One size — 42,000 Btu output at register.

Type "WB-72" Forced Air Furnace—Cast iron. Type "WG" plus forced-air circulating unit. One size, 72,000 Btu output at bonnet.

Type 450 Conversion Burner — Pressure-atomizing type. Nozzle capacities from 1 to 5 gal. per hr. Either 12" or 20" blast tube length.

Type 460 Conversion Burner — Highly efficient pressure-atomizing type. Nozzle capacities from 1 to 2 gal. per hour.

for every fuel

Mueller Climatrol

And for every home—fuel-thrifty comfort that makes a profitable sale for you

Here is the famous Mueller Climatrol line—complete, for any size job . . . any type of heat . . . and any of the three popular fuels.

No wonder Mueller Climatrol dealers stay ahead of competition. Look at the all around advantages of this outstanding line.

- ✓ **It is complete** — so you can meet the exact requirements of any heating job.
- ✓ **It is well known** — you are backed by strong national advertising, and the prestige of 93 years of leadership.
- ✓ **It is efficient** — you can count on Mueller's up-to-the-minute engineering developments to deliver the best comfort with the greatest economy.
- ✓ **It is styled for beauty** — you can sell the compact beauty of its modern styling to your most exacting customers.
- ✓ **It is well built** — goes together easily on the job. Ask any Mueller customer — he'll tell you Mueller Climatrol is precision built of quality materials, easy to install.

Cash in on this complete line. Write for details. . . . *L. J. Mueller Furnace Company, 2109 W. Oklahoma Avenue, Milwaukee 15, Wisconsin.*

SINCE 1857

MUELLER Climatrol

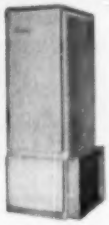
THE MOST COMPLETE LINE IN THE INDUSTRY

THE MOST COMPLETE LINE IN THE INDUSTRY ★ THE MOST COMPLETE LINE IN THE INDUSTRY

GAS FIRED UNITS

Most Luxaire Gas Units, when the Luxaire Oil Burner is installed in place of the Gas Burner, become the Luxaire Oil Units, without any sacrifice in efficiency.

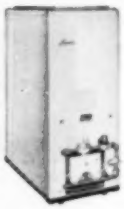
Series A
Steel Air Conditioning Unit with Vestibule and hinged door.



Series H
Utility Air Conditioning Unit. Available with Steel or Cast Iron heating element.

Series G
Gravity Furnace. Available with Steel or Cast Iron heating element

Series CA
Air Conditioning Unit, Cast Iron heating element.



Series A-E
Steel Air Conditioning Unit with Controls exposed.

Luxaire Offers

THE MOST COMPLETE LINE

OF HEATING EQUIPMENT

For all Fuels! GAS·OIL·COAL

Air Conditioning Units and Gravity Furnaces

Both STEEL and CAST IRON Heating Elements

In 1950, it will be easier to sell the Luxaire Line, than to sell against it. The 1950 Luxaire Line of least resistance is the line of greater heating profits for you.

With a heating plant perfectly suited to the requirements of every prospect on your list—architect, builder and home owner—Luxaire provides you with air conditioning units and gravity furnaces; Basement units, Utility units, Counterflow units; heating elements of both steel and cast iron for all fuels, Gas, Oil, Coal. In addition, the same Luxaire Unit that is approved for Oil firing is approved for Gas firing, when the Luxaire Gas Burner is installed to replace the Luxaire Oil Burner.

See your Luxaire Jobber—compare Luxaire heating equipment with any other equipment on the market—before making commitments for 1950.

THE C·A·OLSEN MANUFACTURING COMPANY

Luxaire HEATING & AIR CONDITIONING UNITS

ELYRIA, OHIO

OIL FIRED UNITS

Luxaire Oil Units, when the Luxaire Gas Burner is installed in place of the Oil Burner, become the Luxaire Gas Units, and carry the American Gas Association Seal of Approval.

Series O
Gun, Oil Air Conditioning Unit. Steel heating element.

Series OC
Gun, Oil Gravity Furnace. Steel heating element.

Series OH
Gun, Oil Utility Air Conditioning Unit. Steel heating element.

Series VA
Vaporizing Oil Air Conditioning Unit. Steel heating element.

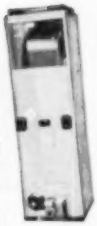
Series VH
Vaporizing Oil Utility Air Conditioning Unit. Steel heating element.

Series VG
Vaporizing Oil Gravity Furnace. Steel heating element.

NEW! REVOLUTIONARY!

The *Luxaire Counterflow* Unit for Heating the Floor in Basementless Houses

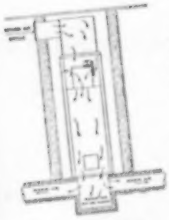
for GAS *for* OIL



No. VHC-75-E
Oil, Counterflow Unit.

No. HC-95-E
Gas Counterflow Unit.

Interior view of Counterflow Unit with Gas Burner.



Sketch showing Counterflow Installation.

The Counterflow unit has been developed for the basementless home—the thousands of homes constructed on a concrete floor slab.

With blower located at top of cabinet, the Counterflow unit discharges the heated air downward into a pit or plenum chamber provided in the concrete slab.

Heat pipes or ducts, leading from pit or plenum chamber are imbedded in the floor slab, or placed under the floor in the "crawl" space. The heated air discharges through registers in the various rooms.

COAL FIRED UNITS

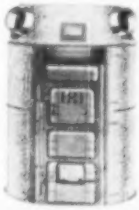
Can be converted to Automatic Firing with either Luxaire Conversion Gas Burner or Conversion Oil Burner. Gravity Furnaces can be converted to Forced Air Heating by Addition of Luxaire Blower-Filter Unit.

Series No. 700
Gravity Furnace. Steel heating element.

Series C
Gravity Furnace. Cast Iron heating element. Available also with round casing.

Series AC-F
Air Conditioning Unit. Steel heating element.

Series No. 600
Gravity Furnace. Steel heating element.



Series C
Pipeless Furnace. Cast Iron heating element.

FOR THE BEST IN HAND TOOLS . . .

W. A. Whitney tools are your best bet because they are simple in design, sturdily constructed for the toughest uses, well balanced for easier handling, made from drop forgings of high grade alloy steel on all main parts, heat treated on all wearing parts, and unconditionally guaranteed against defects in material and workmanship. Our trade mark on

W. A. WHITNEY

every tool is your assurance of entire satisfaction and the utmost in service. Please write us today for our complete catalog.

NO. 1 Ppunch

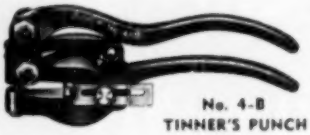
Capacity ⅜" hole through ¼" iron
Length 34". Wt. 23 lbs. Depth of throat 1⅞"
Punches and dies ⅛" to 9/16" by 1/64"

NO. 2 PUNCH

Capacity 5/16" hole through ¼" iron
Length 23". Wt. 14 lbs. Depth of throat 1-11/16"
Punches and dies 3/32" to ½" by 1/64"

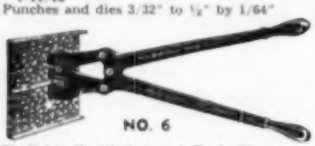
CHANNEL IRON PUNCH

(A companion to No. 2 Punch)
Capacity ¼" hole through ¼" iron
Length 23". Wt. 17 lbs. Depth of throat 1⅞"
Punches and dies 3/32" to ½" by 1/64"



No. 4-B TINNER'S PUNCH

Capacity ¼" hole through 16 gauge iron
Length 8½". Wt. 3 lbs. Depth of throat 2"
Punches and dies 1/16" to 9/32" by 1/64"



NO. 6

Skylight, Ventilating and Tank Flange Punch (Especially adapted for button punching)
Capacity ¼" hole through 3/16" iron
Length 26½". Wt. 10½ lbs. Depth of throat 1¾"
Punches and dies ⅛" to 9/32" by 1/32"

NO. 8-B PUNCH

Capacity ¼" hole through ⅛" iron
Length 18½". Wt. 7½ lbs. Depth of throat 2"
Punches and dies 1/16" to 7/16" by 1/64"

TINNER'S RIVETING HAMMER

TINNER'S SETTING HAMMER

PUNCHES

Whitney Punches For Ball Bearing Screw Punches

No.	Sizes	Dimensions Inches H.	B.	L.
10-1/8	to 1/2 by 32nd	5/8	1/2	1-3/16
20-1/8	to 11/16 by 32nd	7/8	11/16	1-3/4
40-3/16	to 1 by 32nd	1-3/16	1	2-5/16

DIES

Whitney Dies For Ball Bearing Screw Punches

No.	Sizes	Dimensions Inches D.	H.
10-1/8	to 1/2 by 32nd	13/16	15/32
20-1/8	to 11/16 by 32nd	1-1/4	21/32
40-3/16	to 1 by 32nd	2-1/8	15/16

PUNCHES

Whitney Punches For Lever Punches

No.	Sizes	Dimensions Inches D.	L.
1	1/8 to 9/16 by 64th	9/16	2-3/8
*2	3/32 to 1/2 by 64th	1/2	2-3/8
4	1/16 to 9/32 by 64th	5/16	1-3/16
5	1/16 to 9/32 by 64th	9/32	1-1/4
*6	1/8 to 9/32 by 32nd	1/2	2-3/8
7	1/8 to 7/16 by 32nd	7/16	1-7/8
7-1/2	1/8 to 7/16 by 32nd	1/2	2-3/8
8	1/16 to 7/16 by 64th	7/16	1-15/16

*This punch used in No. 2 Channel, Close Corner No. 2, Close Corner Channel, No. 6 and Imperial No. 8.

DIES

Whitney Dies For Lever Punches

No.	Sizes	Dimensions Inches D.	L.
1	1/8 to 9/16 by 64th	1	2
*2	3/32 to 1/2 by 64th	7/8	1-3/4
4	1/16 to 9/32 by 64th	7/16	3/4
5	1/16 to 9/32 by 64th	7/16	3/4
**6	1/8 to 9/32 by 32nd	9/16	1-5/8
7	1/8 to 7/16 by 32nd	3/4	1-7/16
7-1/2	1/8 to 7/16 by 32nd	3/4	1-7/16
8	1/16 to 7/16 by 64th	11/16	1-1/4

*This die used in No. 2, Channel, and Imperial No. 8.
**This die used in No. 6, Close Corner No. 2 and Close Corner Channel.
When ordering punches be sure to specify size of punch and number of tool in which punch is to be used.

NO. 91 BENCH PUNCH

Capacity ½" hole through ¼" iron
¾" hole through 3/16" iron
2" hole through ⅛" iron
Weight 82 lbs. Depth of throat 5"
Punches and dies ⅛" to 2"

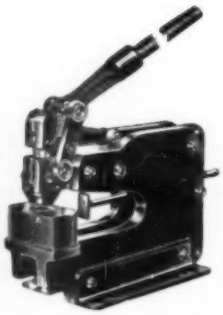
CHANNEL IRON

2½" Flange x ¼" Web
Angle Iron
2½ x 2½ x ¼"

NO. 92 BENCH PUNCH

(Uses No. 91 punches and dies)

Weight 165 lbs. Depth of throat 10"



W. A. WHITNEY MFG. COMPANY

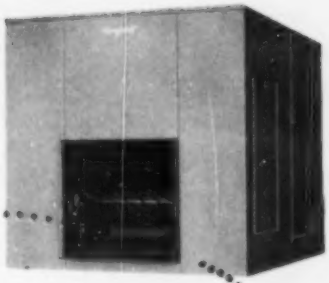
636 RACE STREET **ROCKFORD, ILL.**

Line up with Comfort

for COMFORT has a better Line Up!

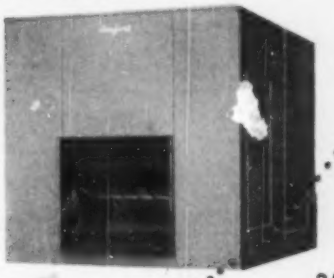
offering a COMPLETE and COMPLETELY COMPETITIVE line of:

- ☆ **AIR WASHERS . . .** "King of the Coolers" in 4 sizes (from 3500 cfm to 10,000 cfm delivery)
- ☆ **Blower-Type EVAPORATIVE COOLERS** in 6 sizes (2000 to 10,000 cfm)
- ☆ **Fan-Type WINDOW COOLERS** in 3 models (1300 to 1600 cfm)



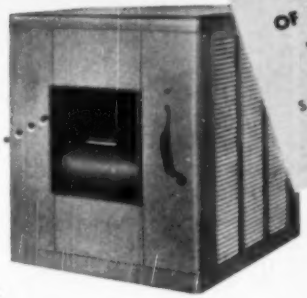
100-W

Comfort
AIR-WASHERS



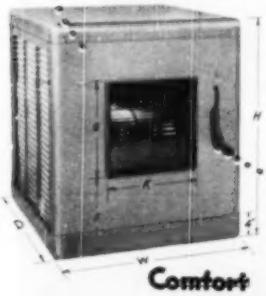
35-W

See THE STARS OF THE 1950 SHOW
at Comfort Products Corp.
Booth No. 212
S. W. Air Conditioning Exposition
DALLAS
JANUARY 23-27

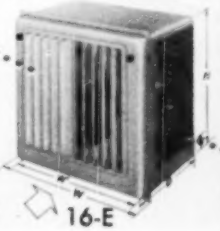


100-E

35-E



Comfort
Blower-Type
EVAPORATIVE COOLERS



Comfort
Fan-Type
EVAPORATIVE COOLER

16-E

News for 1950!

• outside view of a conventional sash window installation

• inside view of a steel casement window installation

NEW INSTALLATION ACCESSORIES for easy installation of units 20-E to 35-E in STEEL CASEMENT as well as wood sash windows

for further information write to

COMFORT PRODUCTS CORP.
2220 LAMESA • DALLAS TEXAS

33 and
DUST STOP
DUST STOP

UL now make the BEST even BETTER

Presenting TWO Great New Features of the Original, Genuine

DUST-STOP* AIR FILTERS

*T. M. REG. U. S. PAT. OFF.

33 **DUST-STOP*** Air Filters now have ONE-THIRD longer life with the same high efficiency as before.

UL **DUST-STOP** Air Filters are now listed by the well-known Underwriters' Laboratories, Inc.

For the detailed story behind these great money-saving improvements, see this magazine next month, or write to Owens-Corning Fiberglas Corporation, Toledo 1, Ohio.

FIBERGLAS IS IN YOUR LIFE . . . FOR GOOD!

This marker is now on the DUST-STOP label. Look for it . . . you can rely on it.

**DUST-STOP is the trade-mark of Owens-Corning Fiberglas Corporation for impingement-type air filters made of glass fibers. FIBERGLAS is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with glass fibers.*

OWENS-CORNING
FIBERGLAS

**DUST-STOP is the trade-mark of Owens-Corning Fiberglas Corporation for impingement-type air filters made of glass fibers.*

ROUND OAK

"The Line of Least Resistance" for 1950

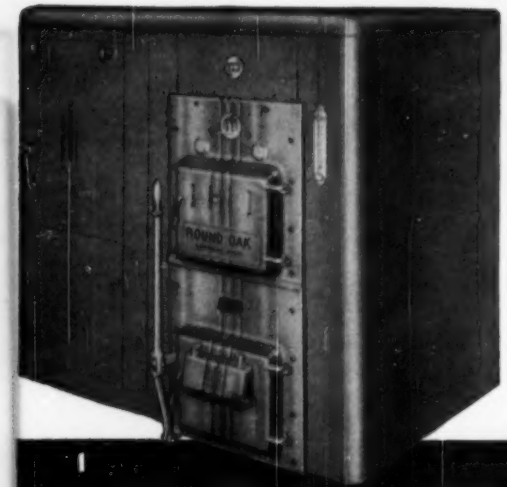
- ✓ **A Famous Name in Heating Since 1871**
- ✓ **Sensational New Designs**
- ✓ **Sound Engineering and Construction**
- ✓ **An Enviable Reputation for Fair Dealing**

● Here's a complete line of furnaces that *practically sell themselves!* Everybody knows that *Round Oak* furnaces have always been a step ahead of competition in outstanding values. Now, for 1950, they are bigger and better "buys" than ever before. They are truly "the line of least resistance" for 1950.

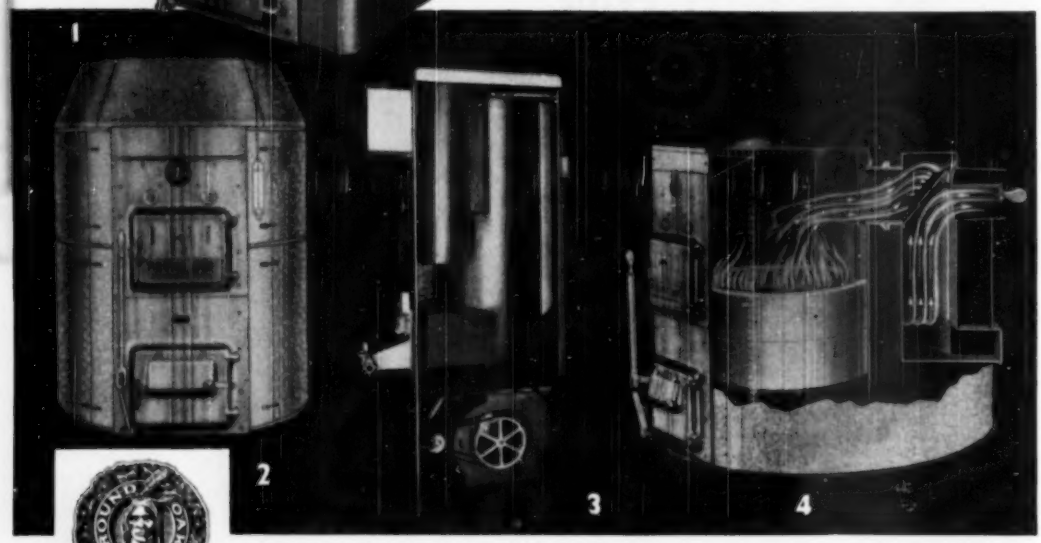
Over three-quarters of a century of engineering experience and "Know How" has been incorporated in each of the famous *Round Oak* Furnaces shown below. Each utilizes the sensationally efficient "Thermejector" principle of combustion, radiation and heat transfer—the principle that insures the greatest possible efficiency in operation.

Built with extra margins of strength and durability, each *Round Oak* unit makes enthusiastic owners. One user tells another. Sales are easier made with *Round Oak.*

Send for new literature today! Give yourself a better chance for bigger sales and profits in 1950, with this famous, fast-selling line.



1. Round Oak's famous complete winter air conditioner for coal, oil or gas.
2. Beautiful stream-lined gravity furnace—an extraordinary value.
3. Round Oak's greatest unit for natural, mixed and manufactured gas. The famous Hi-Boy design for compact space-saving installation. One of many gas models available. Oil Models of similar design also available.
4. The greatest economy unit of them all—Round Oak's famous round-cased steel furnace. Coal or oil fired.



ROUND OAK COMPANY, Inc. • Dowagiac, Michigan

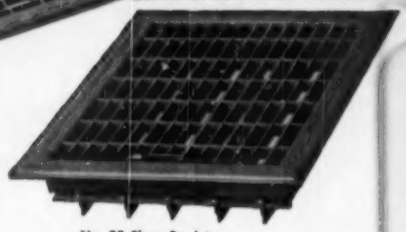
"A Famous Name in Heating Since 1871"

INDEPENDENT "Fabrikated"

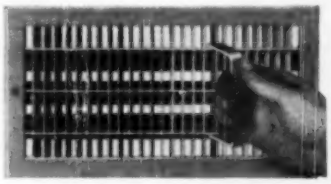
Reg. U. S. Pat. Off.

AIR CONDITIONING REGISTERS AND GRILLES

"Fabrikated" construction, originated by Independent, has met wide acceptance because of its pleasing appearance, strength and rigidity. "Fabrikated" construction also provides more than usual free area, furnishing greater capacities for the same size opening. At the same time uniformity of design in wall, baseboard or floor registers and grilles is now possible.



No. 32 Floor Register



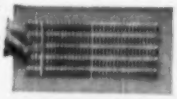
Style 321A Grille (With Deflecting Vanes)

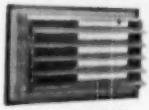
INDEPENDENT "Fabrikated" WALL GRILLES

With Deflecting Vanes Provide 4-Way Air Flow

Compound deflections of air flows can be achieved with accuracy and certainty either at installation or any time afterward to meet changed conditions. Furnished with vertical grille bars and horizontal deflecting vanes or with horizontal grille bars and vertical deflecting vanes. Practically any size in even inches. These same grilles are supplied without deflecting vanes to provide 2-way air flow.

INDEPENDENT WROUGHT STEEL AIR CONDITIONING REGISTERS

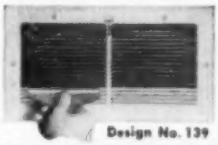




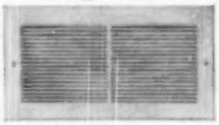
Design No. 238

Vertical grille bars are manufactured at an angle of 30 degrees, one half to the right, one half to the left. They may be bent straight outward or to direct air flow at any other right or left angle. Multiple valves at the rear can be set to deflect air flow up, down, straight out, or for complete closure. Made for baseboard or wall installation.

INDEPENDENT WROUGHT STEEL REGISTERS

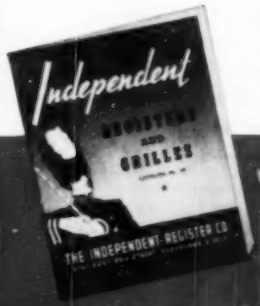


Design No. 139



Design No. 39-WG

These registers do not compete with "Fabrikated." They comprise a high grade line of air conditioning registers of attractive appearance which are desirable for lower priced installations. Made in both wall and baseboard types.



WRITE FOR COMPLETE CATALOG No. 48

Always Leading . . . Always Progressing

THE INDEPENDENT REGISTER CO.

3747 East 93rd Street, Cleveland 5, Ohio

MONCRIEF
Units for GAS·OIL·COAL

STEEL and CAST IRON

HEATING ELEMENTS

GRAVITY FURNACES

and

AIR CONDITIONING UNITS

A Furnace for Every Requirement

in the

COMPLETE MONCRIEF LINE

Important!

MONCRIEF Oil Units, by substituting the Moncrief Gas Burner for the Oil Burner are converted to A.G.A. approved Moncrief Gas Units!

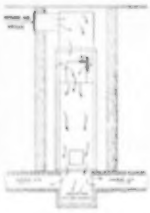
Most Moncrief Gas Units, by substituting the Moncrief Oil Burner are converted to Moncrief Oil Units without any change in efficiency.

No. VUC-75-E Oil Counterflow Unit

No. UC-95-E Gas Counterflow Unit

Interior view of Counterflow Unit with Gas Burner.

Sketch showing Counterflow installation.



The MONCRIEF *Counterflow*

Unit is designed with blower at top of cabinet to discharge the heated air directly downward into pipes placed in or below the concrete floor slab of basementless homes. Heat pipes connect to baseboard or floor registers through which the circulated air enters the home. Counterflow units are designed to burn either

GAS or OIL

GAS FIRED UNITS

Series L
Steel Air Conditioning Unit with Vestibule and hinged door.

Series U
Utility Air Conditioning Unit. Available with Steel or Cast Iron heating element.

Series W
Gravity Furnace available with Steel or Cast Iron heating element.

Series CL
Air Conditioning Unit. Cast Iron heating element.

Series L-E
Steel Air Conditioning Unit with Controls exposed.

OIL FIRED UNITS

Series P
Gun, Oil Air Conditioning Unit. Steel heating element.

Series PW
Gun, Oil, Gravity Furnace. Steel heating element.

No. PH
Gun, Oil Fired, Utility Air Conditioning Unit. Steel heating element.

Series VL
Vaporizing Oil, Air Conditioning Unit. Steel heating element.

Series VU
Vaporizing Oil. Utility Air Conditioning Unit. Steel heating element.

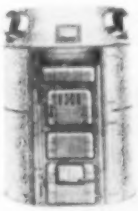
Series VW
Vaporizing Oil. Gravity Furnace. Steel heating element.

COAL FIRED UNITS

Series No. 700
Gravity Furnace. Steel heating element.

Series C
Gravity Furnace. Cast iron heating element. Available also with Round Casing.

Series AC-F
Air Conditioning Unit. Steel heating element.



Series No. 600
Gravity Furnace. Steel heating element.

Series C
Pipeless Furnace. Cast iron heating element.

MONCRIEF SUREFIT FURNACE PIPE AND FITTINGS

Moncrief Surefit Pipe and Fittings are all that the name implies. Die stamped and machine made, they are manufactured to precision standards. They fit accurately! They fit easily and quickly! They lock tightly.

For either Gravity or Forced Air, Moncrief Surefit Pipe and Fittings provide the best for a streamlined, good-looking and economical installation.

Back of Moncrief Surefit Pipe and Fittings are not only the knowledge and fine workmanship acquired from years of manufacturing experience, but also one of the largest plants in the industry equipped with the most modern machinery.

THE HENRY FURNACE COMPANY

Medina, Ohio

HEATING AND AIR CONDITIONING UNITS — MONCRIEF — FURNACE PIPE AND FITTINGS

How's your stock?

Do you have enough U·S·S Galvanized Steel Sheets to handle more than two or three complete jobs at a time? Don't get caught short! Remember, your customers know that the familiar U·S·S trade-mark on sheets stands for the finest quality. To say that you use U·S·S Steel Sheets may help you land additional business!

The brand most in demand...

● The tremendous popularity of U·S·S Galvanized Steel Sheets is the result of their superior workability and wearability. Made to meet the exacting requirements of sheet metal workers, these sheets are uniform in finish, in flatness, and in ductility. They shear, roll, bend, and seam exceptionally well . . . advantages that put you in better position to handle a bigger, more profitable share of business. And, because U·S·S Galvanized Steel Sheets are especially processed with a tightly adhering coating of zinc which keeps out deteriorating oxygen and water vapor, they offer high resistance to rust and corrosion . . . an advantage which gives them longer life . . . and insures better looking jobs.

CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH & CHICAGO
COLUMBIA STEEL COMPANY, SAN FRANCISCO
TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRIBUTORS, COAST-TO-COAST
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS

U·S·S STEEL SHEETS

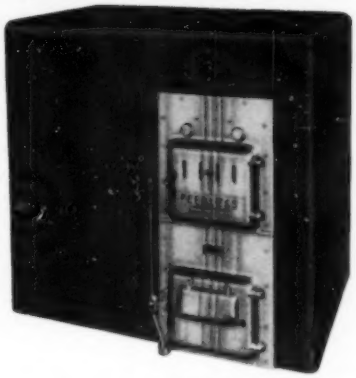
9-1815

UNITED STATES STEEL

Cut Yourself a Piece of . . .

PEERLESS *Anniversary Cake*

Greatest Values in Peerless' Fifty Years of Manufacturing



Peerless complete, forced air furnace in beautiful streamline cabinet. For coal, oil or gas. Tops them all in value.

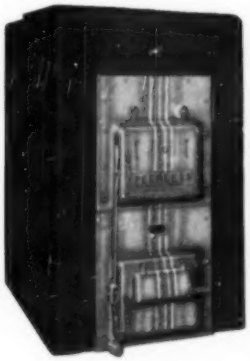
A New "Thermejector" Furnace for every purse and purpose

Dealers, here is *your golden opportunity*—while PEERLESS celebrates their golden anniversary—to get started with *the greatest line of furnaces* this old reliable company has ever had the pleasure of offering to the trade.

Incorporating the sensational, super-efficient, scientific "Thermejector" principle, which combines superior combustion, radiation and heat transfer, each of these new steel furnaces is *an outstanding* value, yet each pays a handsome profit to the dealer.

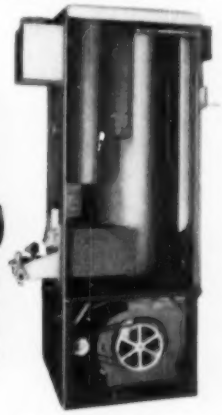
Sign up with PEERLESS for 1950. Get the line that is complete—*enabling you to sell every prospect.* Make this your greatest year in business—with PEERLESS! Write for new literature—just off the press and get the money-making PEERLESS proposition *today!*

Famous Peerless "Oil Master"—completely automatic winter air conditioner. Most for the money in first cost and in economical operation.



Peerless challenge to the trade in a compact square cased gravity furnace. Meets and beats all competition.

Peerless great sales maker! The choice of thousands for lowest first cost and efficiency.



Hi-boy gas fired furnace, for natural, mixed and manufactured gas. Ideal for compact space-saving installation. Similar model available for oil.

PEERLESS FOUNDRY COMPANY 1833 LUDLOW AVENUE INDIANAPOLIS, INDIANA

Pioneers in Warm Air Heating for 50 Years

YEAR ROUND LINE

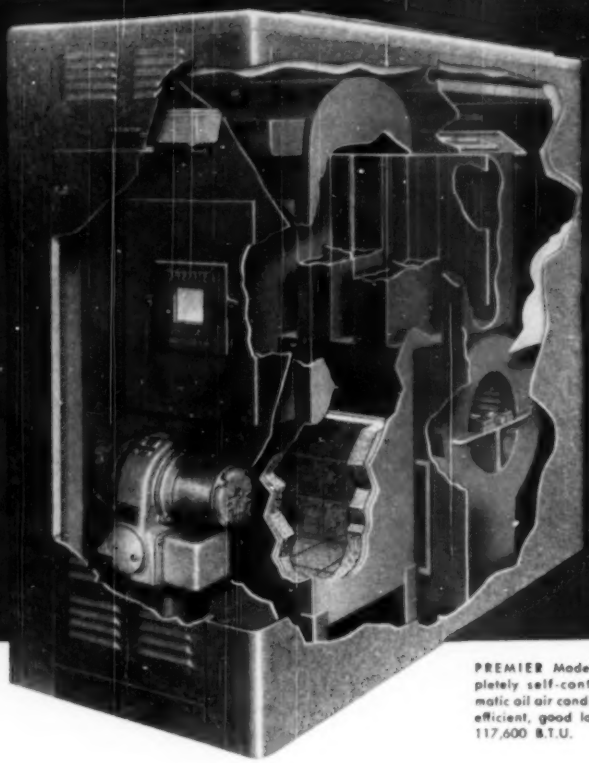
EXCLUSIVE FRANCHISE

FACTORY PLAN SERVICE

FIELD ENGINEERING SERVICE

SALES and ADVERTISING SERVICE

TIME PAYMENT PLAN



PREMIER Model RX-8, completely self-contained, automatic oil air conditioner. Quiet, efficient, good looking. Up to 117,600 B.T.U.

Premier

31st YEAR
SAME OWNERSHIP
SAME MANAGEMENT
SAME SALES POLICY

Pledges its sincerest efforts to help the Independent Furnace Dealer achieve a full measure of security and prosperity in 1950.

PREMIER FURNACE COMPANY, DOWAGIAC, MICHIGAN

Heating and Air Conditioning Products

Let An

Atlas CABINET

SELL YOUR FURNACE

Attractive furnace cabinets are a necessity in our modern day living, where the basement recreation room shares equal popularity with the front parlor. Atlas furnace cabinets have streamlined, rounded edges; modern hardware and are beautifully colored in hammerloid, wrinkle or plain baked enamel finishes. They enhance the compact, modern design of the popular basement amusement room.

Traditional metal, screw and bolt assembled cabinets consume several times the installation hours that the Atlas cabinet requires. For there are no bolts or screws in an Atlas "tailormade" cabinet. It "fits together" smoothly and simply ... which is a big selling point for your dealers!

Lower installation cost in the field is due to this better system of construction. It is labor-saving ... cost-saving, because an Atlas cabinet is easy to assemble.

Atlas cabinets will appeal to you we know; for the combination of the above features means increased sales for you without hazarding increased overhead expense. And remember, Atlas "tailormade" furnace cabinets means they are ...

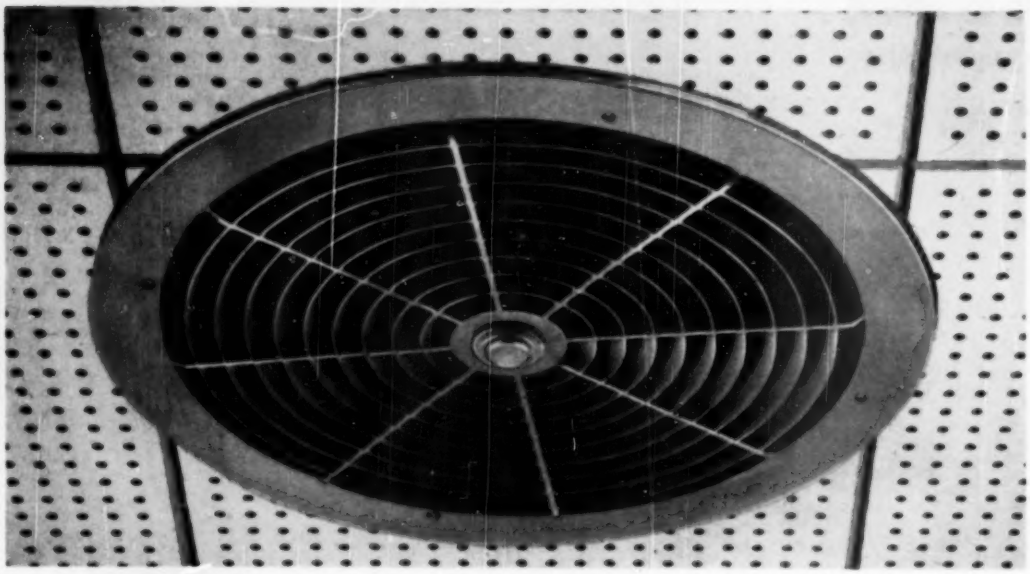
Specification built to suit the desires of your market, and the demands of your particular furnace models. They will carry, of course, your name, trademark and other identifying features; and not that of Atlas.

Send Your Furnace Specifications for Cost Estimates to:

Atlas MANUFACTURING COMPANY

Eustis at Robbins St. Saint Paul 4, Minn.

Announces the NEW No. 500 CEILING OUTLET



Greater Heating Efficiency At LOWER COST

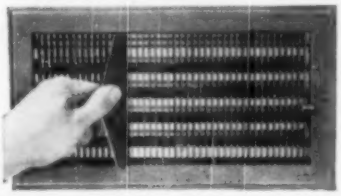
Few heating developments of recent years can match this new U. S. Register contribution for 1950. Dignity, amazing economy, and unusual heating efficiency are all combined in this one development. Now, you can figure your jobs without the heavy expense of massive ceiling outlets, and instead can give your customers the benefit of better heating through attractive multiple outlets—at lower cost!

U. S. No. 500 Ceiling Outlets come in 5 popular sizes—6", 8", 10", 12", and 14". They can be attached to square attic ducts, or used with round attic branch lines. Sponge rubber gaskets are standard equipment. Outlets come packed—one to the carton—10 cartons to shipping case. There are many places, residential and commercial, where you can use these new outlets to advantage this year. Be sure to get all the facts.

Send for Price List and Installing Methods

UNITED STATES REGISTER COMPANY
BATTLE CREEK, MICHIGAN
MINNEAPOLIS • KANSAS CITY • ALBANY
SOLD BY LEADING JOBBERS FROM COAST TO COAST

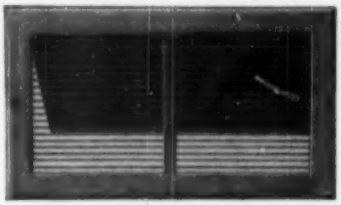
PLUS These American Favorites To Boost Your Profits in 1950



No. 256 4-WAY FLOW A-C REGISTERS

(Featured in Metalar and Prime Coat Finishes)

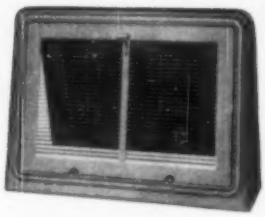
These are the finest of Air-Conditioning Registers. Uniquely designed, simplified, multiple-valves control up or down air deflection with a minimum of resistance—operate smoothly. Grille bar deflection easily changed with the handy setting-wrench to control lateral airflow.



No. 153 AIR-CONDITIONING REGISTERS

(Featured in Metalar and Prime Coat Finishes)

For your air-conditioning jobs where quality is demanded, but price is competitive, the No. 153 single valve registers are an excellent recommendation. They provide directional down-flow and hide register interior. Lowest cost—yet good enough for the BEST type of home.



No. 40 SERIES U. S. GRAVITY BASEBOARD REGISTERS

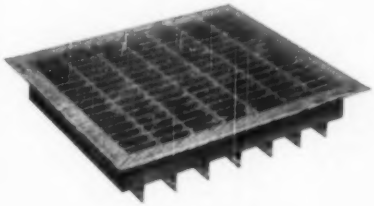
(Featured in Metalar Finish)

Two-Piece Construction with Removable Center which is attached to the Baseboard Frame with Eccentrically Operated TURN-BUTTONS. A feature embodied only in the No. 40 U.S. Baseboard Registers. No loose screws to lose. Achieves a Positive Leak-Proof Connection between Register. Saves installation cost. Try them.

Better HEAT DISTRIBUTION
Lower INSTALLATION COSTS

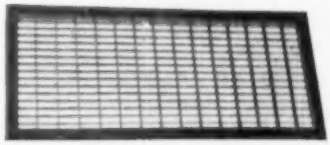
For **all** classes of heating installations—from humble cottages to residential palaces—there are U. S. registers to do a perfect job. Gravity or Air-Conditioning—baseboard, wall, or ceiling—**every** U. S. register is soundly engineered, carefully built and inspected. There are many features to save on installation costs. The modern designs and easy operating controls give lasting satisfaction to your customers.

Send for New No. 50 Pocket Manual and Latest General Catalog and Prices.



No. 400 TRUSSTEEL FLOOR REGISTERS

The Very Best and Strongest in Floor Register Construction. Multiple-valves run SHORT WAY for easier Operation. Cleaner Walls. HEEL-PROOF Register Face. Smooth SEAMLESS CORNERS of unequalled Strength.



No. 405 TRUSSTEEL RETURN AIR FACES

Band Steel bars of unusual strength are assembled into a Grid-Core that supports far above usual weights yet gives you a cold air return with 52% free area. Mesh is HEEL-PROOF. Trussteel-engineered smooth, seamless corners—the neatest, strongest, and best of all types of Floor Faces.

UNITED STATES REGISTER COMPANY
BATTLE CREEK, MICHIGAN
MINNEAPOLIS • KANSAS CITY • ALBANY
SOLD BY LEADING JOBBERS FROM COAST TO COAST

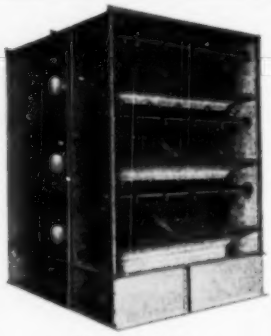
Industrial
Process Fans

Furnace and
Unit Conditioner Fans

Extra Heavy Construction . . .

Unicoil
Conditioning Units

Ventilating
and Conditioning Fans

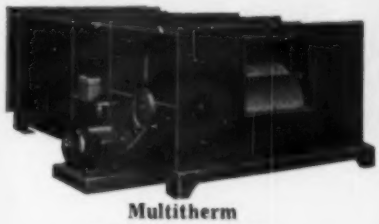


Air Washers
and Purifiers

Choice of leading architects, engineers and contractors — for nearly 40 years.

SEE OUR CATALOG IN SWEET'S

Unitherm
Unit Heaters
with Syncrotherm Control



Multitherm
Conditioning Units

Clarco
Unit Heaters

. . . for

Extra Years of Service

No weaklings in the Clarage air handling and conditioning line! . . . Every unit we built is *fully equal* to the job it handles.

If faithful performance and operating economy are what you're after, we have the answer to your requirements. Your inquiry is invited. Try us!

An Industry Leader
in Research,
Engineering,
Manufacturing

CLARAGE FAN COMPANY

KALAMAZOO, MICHIGAN — Application Engineering Offices in All Principal Cities

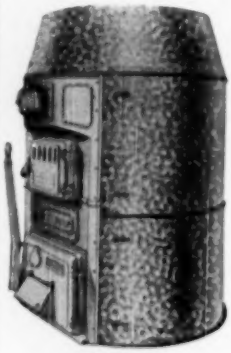
"IT'S A *Rybolt*"

For COAL – For GAS – For OIL

SERIES 153
Cast Iron, Coal-Fired
Winter Air Conditioner

SERIES 58
Cast Iron, Gas-Fired
Winter Air Conditioner

SERIES 53
Cast Iron, Gas-Fired
Gravity Furnace



SERIES 15
Cast Iron, Coal-Fired
Gravity Furnace

SERIES RO
Steel, Oil-Fired
Winter Air Conditioner

SERIES RS
Steel, Gas-Fired
Winter Air Conditioner

SERIES RH 78
Steel, Coal-Fired
Winter Air Conditioner

SERIES 54
Hi-Boy
Cast Iron, Gas-Fired
Winter Air Conditioner

SERIES RSG
Steel, Gas-Fired
Gravity Furnace

THE RYBOLT HEATER COMPANY

FOR DEPENDABLE, CONVENIENT, ECONOMICAL HEATING

There's a RYBOLT Unit for Every Fuel and Home Heating Requirement

● It's a Rybolt and therefore it's bound to give your customer the fullest measure of satisfaction and pride of ownership. In the complete Rybolt line there's a type of unit to meet the requirements of every customer, from the more simple gravity furnaces to the most advanced automatic forced air unit.

Rybolt heating units come in all sizes...in steel or cast iron...fired by coal, gas or oil. First of all, engineered and built for utmost dependability, convenience and economy, they are also decidedly attractive in design and finish.

Quality is reflected in every detail, the result of the high standard adhered to for more than 35 years of fine furnace building.

Get the complete story on the complete Rybolt line, with its many selling advantages.

Write for descriptive literature.

MEMBER NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION
INDOOR COMFORT

SERIES RC
Cast Iron, Gas-Fired
Winter Air Conditioner

—and Here is the Latest Addition to the RYBOLT Line

The RC Series

Fully representative of the Rybolt quality standard it's a new cast iron gas-fired winter air conditioner. It's a deluxe heating unit engineered and built for long life and lasting heating satisfaction. The cast iron heating sections are independently controlled, providing unusual flexibility of heating service. It's an unusually handsome unit, with its dignified design and attractive two tone gray baked enamel finish. Comes in four sizes, 110,000 BTU, 130,000 BTU, 165,000 BTU and 195,000 BTU.

Write for descriptive folder

rh

615 MILLER ST. ★ ASHLAND, OHIO

Leading products feature quiet power

EMERSON-ELECTRIC MOTORS for Belted Fans and Blowers

Specially designed for the demands of belted fans and blowers, Emerson-Electric blower motors incorporate all the electrical and mechanical specifications best suited for this service. Split-phase construction; available in ratings of 1/6, 1/4 and 1/3 h.p. These motors have resilient mountings and automatic reset thermal protectors. For complete information write for Motor Data Bulletin No. 319.

A quiet operating mechanism is a sales advantage. It will pay you to consider the *heart* of your product—the motor—in the light of the enviable record Emerson-Electric Motors have established for quiet operation on scores of America's most reputable products.

The consistently quiet operation of Emerson-Electric Motors is a natural "by-product" of a 60-year-old tradition of *precision* manufacturing . . . enforced by literally hundreds of exacting tests and inspections at every stage of production . . . and backed by unsurpassed research and designing facilities, plus experience.

In addition to the advantage of *quiet* power, Emerson-Electric Motors give your products greater dependability, longer life and require less servicing. Your inquiry is invited on a complete line of NEMA standard or special purpose motors, 1/20 to 5 h.p.

THE EMERSON ELECTRIC MFG. CO., ST. LOUIS 21, MO.

EMERSON ELECTRIC
MOTORS • FANS APPLIANCES

TESTED FAVORITES...

CONTINENTAL STEEL CORP. STEEL CONTINENTAL SHEETS KOKOMO, IND.

Product-Proved

SHEETS

● Continental sheets are favored by hundreds of leading manufacturers and fabricators, because they have been proved in many product uses. Each of these Continental sheets has special qualities which make it a standout in different and *difficult* forming operations. For a premium sheet that works readily and has extra rust resistance, ask for KONIK. If the job calls for a sheet to take and hold fine finishes without costly preparatory treatment, you'll like GALVANNEALED. Another Continental sheet with superior finishing qualities is DULL-COAT. Then there is GALVANIZED, a uniformly tempered commercial sheet which handles and solders excellently. Two other tested Continental favorites are COPPER STEEL, noted for rust resistance and workability, and ELECTRICAL, made especially for manufacturers of electrical equipment. Let us or your jobber recommend the right Continental sheet for your product.

A patented steel containing copper, nickel, and chromium, KONIK is one of the finest, most enduring steels you can buy.

CONTINENTAL STEEL CORP. COPPER NICKEL CHROMIUM KONIK METAL KOKOMO, IND.

An excellent steel for long life and rust resistance, COPPER STEEL is uniform in temper, works easily.

CONTINENTAL STEEL CORP. Copper Steel KOKOMO, IND.

GALVANNEALED has a matte-like surface which "takes" and "holds" fine finishes. No preparatory treatment needed.

CONTINENTAL STEEL CORP. STEEL Galvannealed SHEETS KOKOMO, IND.

Like GALVANNEALED, Continental DULL-COAT has a good surface for taking paints, enamels and lacquers.

CONTINENTAL STEEL CORP. COPPER Dull-Coat STEEL KOKOMO, IND.

A sheet made especially for electrical equipment manufacture. ELECTRICAL's uniform temper makes it excellent for most such applications.

CONTINENTAL STEEL CORP. ELECTRICAL CONTINENTAL SHEETS KOKOMO, IND.

CONTINENTAL STEEL

CONTINENTAL
STEEL CORPORATION

GENERAL OFFICES • KOKOMO, INDIANA

PRODUCERS OF Steel Sheets, including: Continental GALVANIZED, KONIK and COPPER-STEEL culvert sheets.

COPPER-STEEL Galvanized, KONIK steel sheets Galvanized, DULL COAT, Continental GALVANNEALED, ELECTRICAL, Hot Rolled Pickled.

ALSO, Manufacturer's Wire in many sizes, shapes, tempers, and finishes, Continental Chain Link Fence, Nails, and other steel products.

in 1950...Sell WILLIAMSON

The HOTTEST Line

ENTHUSIASTIC CUSTOMERS

You can get a larger share of the fast, expanding gas heating market with the WILLIAMSON Complete Line of Gas-Fired Furnaces.

Designed and fabricated by one of the country's largest and most experienced warm-air heating organizations . . . now celebrating its 60th Anniversary.

These Gas-Fired Furnaces are the very latest, most modernized on the market. They will net you Bigger Profits.

Gravity Furnace
No. 933-08-8

Forced Air Furnace
No. 933-11-8

WILLIAMSON FURNACES *for GAS, OIL, COAL*

BIGGER PROFITS

GAS-FIRED FURNACES

in the HOTTEST heating field

EASIER INSTALLATIONS

OUR 60th ANNIVERSARY

1—*More "Sell" Features.* Battleship construction, automatic controls, full safety, greater economy, quieter operation, dust free, dirt free, etc.

2—*Priced to Outsell Competition.* Never before so much Quality at rock bottom prices.

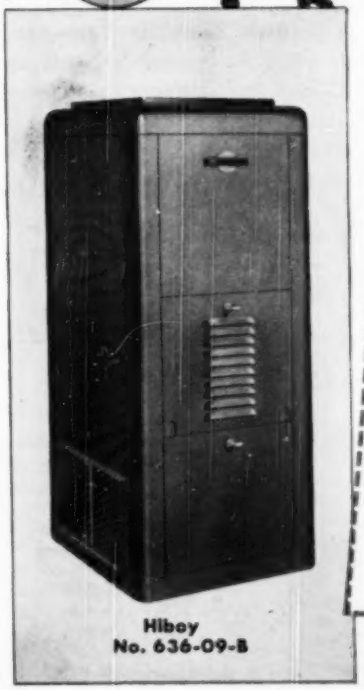
3—*Greater Eye and Buy Appeal.* The neatest, most compact and most beautiful "package." Cabinets finished in two-tone (Silver Brown) baked-enamel.

4—*Current A.G.A. Approval.* All units approved late 1949. You sell the most modern units . . . not 1945 models.

5—*Easier Installations.* Reversible furnace sections eliminate unnecessary duct work, factory set combustion units; cabinet panels fit perfectly; fewer bolts and nuts.

6—*Backed by Hard Hitting Advertising* in newspapers and farm journals.

MORE SALES



Hiboy
No. 636-09-B

DON'T LET THIS PROFIT MAKING OPPORTUNITY GET AWAY!

Return the coupon or wire today for Catalog and Prices.

THE WILLIAMSON HEATER COMPANY, Dept. AA
Oakley, Cincinnati 9, Ohio

Please send literature and prices on your 60th Anniversary line of:

☐ Gas-Fired Furnaces ☐ Oil-Fired Furnaces
☐ Pipe & Fittings

NAME _____

ADDRESS _____

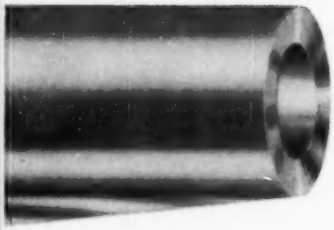
CITY _____ ZONE _____

STATE _____

NOW STOCKED IN 203 CITIES IN 38 STATES

40-LB., 20-LB., 8-LB. COATED

FOLLANSBEE SEAMLESS TERNE ROLL ROOFING



Now you can sell maximum roofing protection and make a nice profit for yourself with Follansbee Seamless Terne Roll Roofing. Once again the 40-lb. coated quality is available in addition to 20-lb. and 8-lb. coated through distributors and jobbers throughout the country.

You'll find a stock of Follansbee Seamless Terne Roll Roofing in these 203 cities where Follansbee jobbers are located. Drop us a postcard and we'll give you a list of those nearest you.

FOLLANSBEE STEEL CORPORATION
GENERAL OFFICES, PITTSBURGH 30, PA.
COLD ROLLED STRIP · ELECTRICAL SHEETS · POLISHED BLUE SHEETS
SEAMLESS TERNE ROLL ROOFING

Sales Offices—New York, Philadelphia, Rochester, Cleveland, Detroit, Milwaukee. *Sales Agents*—Chicago, Indianapolis, St. Louis, Kansas City, Nashville, Houston, Los Angeles, San Francisco, Seattle; Toronto and Montreal, Canada. *Plants*—Follansbee, W. Va., and Toronto, Ohio.
Follansbee Metal Warehouses—Pittsburgh, Pa., Rochester, N.Y., and Fairfield, Conn.

SEAMLESS DISTRIBUTION POINTS—203 CITIES

ALABAMA
Birmingham
Mobile

CALIFORNIA
Fresno
Los Angeles
Oakland
Sacramento
San Francisco

COLORADO
Denver

CONNECTICUT
Bridgeport
Fairfield
Hartford
New Britain
New Haven
Norwalk
Norwich
Stamford

DELAWARE
Wilmington

DISTRICT OF COLUMBIA
Washington

FLORIDA
Gainesville
Jacksonville
Tampa

GEORGIA
Atlanta
Augusta
Savannah

ILLINOIS
Aurora
Chicago
Decatur
Elgin
Evanston
Galesburg
Kankakee
Moline
Peoria
Quincy
Rockford
Springfield

-FOLLANSBEE TERNE ROOFING

INDIANA
Anderson
Evansville
Fort Wayne
Indianapolis
Richmond
South Bend
Terre Haute

IOWA
Burlington
Clinton
Davenport
Des Moines
Dubuque
Fort Dodge
Ottumwa
Sioux City
Waterloo

KANSAS
Atchison
Salina

KENTUCKY
Ashland
Lexington
Louisville

LOUISIANA
New Orleans

MAINE
Portland

MARYLAND
Baltimore

MASSACHUSETTS
Boston
Holyoke
South Boston
Springfield
Worcester

MICHIGAN
Bay City
Dearborn
Detroit
Escanaba
Grand Rapids
Jackson
Menominee
Saginaw

MINNESOTA
Duluth
Minneapolis
Minnesota Transfer
St. Paul

MISSOURI
Joplin
Kansas City
St. Louis

NEBRASKA
Hastings
Lincoln
Omaha

NEVADA
Reno

NEW JERSEY
Asbury Park
Atlantic City
Bayonne
Freehold
Hawthorne
Jersey City
Newark
New Brunswick
North Bergen
Plainfield
Trenton

NEW YORK
Albany
Amsterdam
Binghamton
Brooklyn
Buffalo
Elmira
Far Rockaway, L.I.
Floral Park
Glens Falls
Hollis, L.I.
Jamaica, L.I.
Jamestown
Kingston
Liberty
Long Island City
Mamaroneck
Mineola, L.I.
New York
Niagara Falls
Ogdensburg
Olean
Poughkeepsie
Rensselaer
Richmond Hill, L.I.
Riverhead, L.I.
Rochester
Syracuse
Tarrytown
Troy
Utica
Watertown
Weedsport
Yonkers

NORTH CAROLINA
Charlotte
Wilmington

OHIO
Canton
Cincinnati
Cleveland
Columbus
Dayton
Delphos
Mansfield
Marietta
Tiffin
Toledo
Youngstown

OKLAHOMA
Oklahoma City
Picher
Tulsa

OREGON
Portland

PENNSYLVANIA
Allentown
Danville
Easton
Erie
Harrisburg
Hazleton
Huntington
Lancaster
Lewisburg
Lewistown
New Castle
Philadelphia
Pittsburgh
Pottsville
Reading
Scranton
Shamokin
Wilkes Barre
Williamsport
York

RHODE ISLAND
Providence

SOUTH CAROLINA
Columbia

SOUTH DAKOTA
Sioux Falls

TENNESSEE
Chattanooga
Johnson City
Knoxville
Memphis
Nashville

TEXAS
Dallas
Fort Worth
Harlingen
Houston
Lubbock
San Antonio
Temple

VIRGINIA
Lynchburg
Norfolk
Richmond
Roanoke

WASHINGTON
Seattle
Spokane
Tacoma

WEST VIRGINIA
Belington
Charleston
Clarksburg
Elkins
Fairmont
Parkersburg
Wheeling

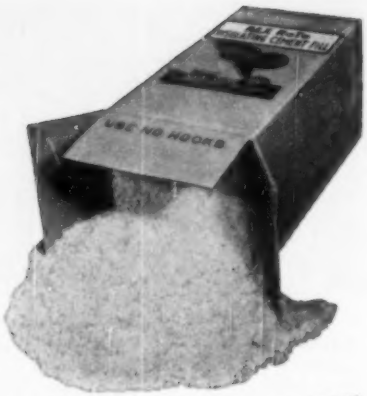
WISCONSIN
Appleton
Ashland
Green Bay
La Crosse
Manitowoc
Milwaukee
Portage
Racine

WYOMING
Cheyenne

Instant COMBUSTION EFFICIENCY *Immediate* SAVINGS

With

REX RoTo COMBUSTION CHAMBERS



REX ROTO Insulating Cement Fill

A blend of pre-shrunk insulating materials having higher insulating properties and fills greater space than any other known blended insulating fill having the proper amount of bonding materials.

Very light in weight.

Packed in convenient sized shippers. Shippers may be used for mixing container as minimum amount of water is required.

The REX ROTO Horizontal Rectangular Combustion Chamber.

FOR ANY STYLE FURNACE WITH ANY MAKE BURNER

QUICK SURFACE TEMPERATURE

NO CUTTING OR CEMENTING

REX ROTO Vertical Combustion Chamber, with REX ROTO Baffle installed.

For further information write

REX CLAY PRODUCTS CO.

Main Office and Plant: 14414 Dexter Blvd., Detroit 6, Mich. Factory Branch: 68 Tivoli St., Albany, N. Y.

TIME TESTED
CONSUMER APPROVED
SHIPPING CONTAINER

Especially Designed to Prevent Breakage in Shipment

For further information write

REX CLAY PRODUCTS CO.

Main Office and Plant: 14414 Dexter Blvd., Detroit 6, Mich. Factory Branch: 68 Tivoli St., Albany, N. Y.

3 REASONS FOR CUSTOMER-CONFIDENCE

when you install MAID-O'-MIST Convector Humidifiers

For Modern Forced Air Heating Systems

Designed for fast and efficient evaporation of water, Maid-O'-Mist's narrow, individual troughs for each evaporator pad do not restrict the flow of heated air. Available in 13 different sizes, these humidifiers have evaporation capacities of 1 to 10 gallons of water per day. Made entirely of non-ferrous metal and equipped with automatic (float operated) supply valve.

60% LESS AIR RESTRICTION IN THE PLENUM—

The individual, narrow troughs have a minimum of air flow restriction which permits their use in small plenums. Result—heating efficiency, a boost to your professional reputation.

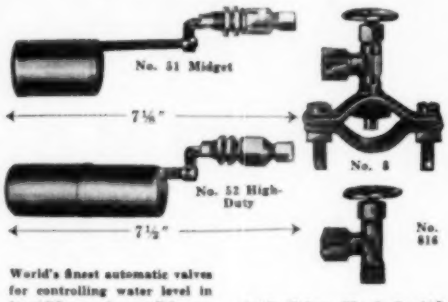
30% MORE EVAPORATING AREA—

Fast continuous humidification even at low furnace temperatures or when the thermostatic control temporarily cuts off. Result—satisfied customers, more business for you.

50% LESS INSTALLATION TIME—

You just cut out the opening in the plenum, attach the plenum flange frame, slip in the factory-assembled unit and make the water connections. A quick, easy profitable job for you.

MAID-O'-MIST BRASS FLOAT VALVES AND SADDLE VALVES FOR THAT INSIDE JOB



World's finest automatic valves for controlling water level in humidifiers, air conditioners, evaporative coolers, air washers, etc. Easy thumb screw adjustment permits raising or lowering water line as required. Capacity sizes from 1 qt. to 1½ gals. per min. Pressures up to 125 lbs.

Saddle Valves (No. 8) for ½" and ¾" iron pipe. Each consists of machined brass forgings with insert tube to fit ¾" hole, and with brass wheel handle. Needle Valves (No. 816) control water supply to humidifier and feed valves.

START CASHING-IN

ON THESE DIVIDENDS NOW!

See your jobber or write for attractive prices.

MAID-O'-MIST INC.
3213 N. Pulaski Road
Chicago 41, Illinois

AUTOMATIC HUMIDIFIERS FOR ALL TYPES OF HEATING SYSTEMS

MEYER —*The Pioneer Company in Steel Furnace Manufacture Offers You*

New Ammunition

FOR TWO-GUN SELLING TO 1950 FURNACE BUYERS

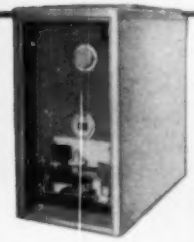
DEFINITELY COMPETITIVE IN PRICE

AIM FOR 1950 orders with Meyer's two new air-conditioner Lo-Boys — one for gas, one for oil. Either is ideal for a modern home's small basement, small utility room — and small budget.

These new Lo-Boys are shipped to you completely factory assembled, with heavy gauge base pan. Handsome red cases fit over their compact, space-saving design. Yet trouble-free performance and fuel thrift still identify these top-caliber units as members of the more-than-ever complete Weir-Meyer line.

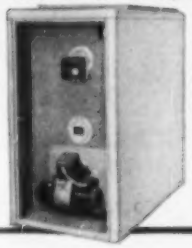
[redacted] 71.2%* of 1950 furnace orders can be filled with these units! They're the ammunition you need for two-gun selling in 1950. Let the coupon below bring you more information on these and other leaders of the Weir-Meyer line.

* Result of an impartial survey. This percentage may run higher in your own locality.



GAS
Meyer Series A-1 Lo-Boy Gas-Fired Furnace — Input: 100,000 Btu/hr.

WEIR-MEYER MEANS *MODERN* HEAT



OIL
Meyer Series A-1 Lo-Boy Oil-Fired Furnace — available with either pressure or vaporizing burner — output at bonnet: vaporizing oil, 80,000 Btu/hr; pressure oil, 95,000 Btu/hr.

THE MEYER FURNACE COMPANY
GENERAL OFFICES: PEORIA 2, ILLINOIS

INDOOR COMFORT

MEYER FURNACE CO.
Dept. AG2, Peoria 2, Illinois
Gentlemen:
Please rush full details on the Meyer Series A-1 Lo-Boy, both Oil-fired and Gas-fired — plus information on the entire Weir-Meyer line . . . at no obligation.

Name _____

Address _____

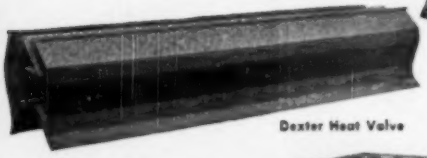
_____

Manufacturers of Weir & Meyer Furnaces • Air Conditioners for Gas — Oil — Coal • Factories: Peoria and Peru, Illinois

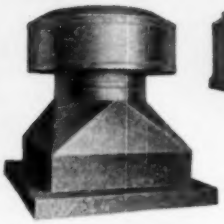
Here's Your Quick Selection Guide for Swartwout Roof Ventilators

Cash in on the hundreds of ventilation jobs every year in your community — on new and old buildings. Send for these valuable Swartwout Bulletins — No. 335 and No. 333A.

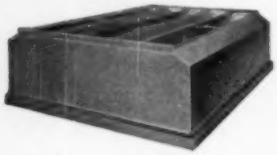
Gravity Ventilators



Dexter Heat Valve



VALVENT



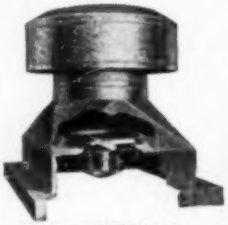
AIRMOVER

Rotary

AIRVALVE

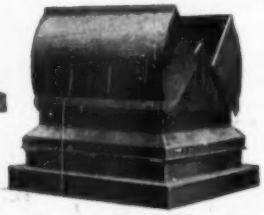
Powered Ventilators

Airjector



Powered VALVENT

Also Industrial Intake Louvers



Ject-O-Valve

Swartwout

Industrial Ventilating Specialists

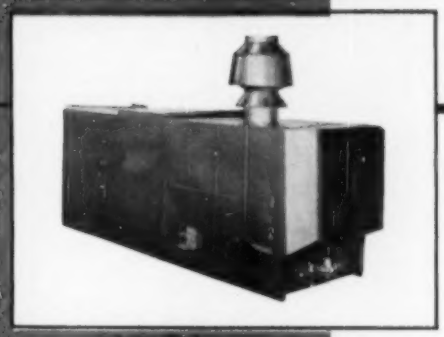
THE SWARTWOUT COMPANY • 18511 Euclid Ave., Cleveland 12, Ohio

ALL DOMESTIC HEATING REQUIREMENTS

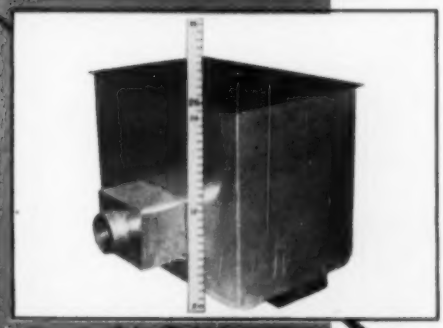
JOHN ZINK

"HEAT MAKERS"

John Zink
CONVERSION BURNER
Burns All Gases. Blue Flame type (above) or Luminous Flame.



John Zink
FORCED DRAFT
Central gas heater that can be installed anywhere.



John Zink
FLOOR FURNACE
For gas fuels in Short and Regular models.

You can't beat John Zink "Heat Makers" for any domestic installation when converting to gas fuels; where central systems, that can be set anywhere are required; and for floor furnace heat.

John Zink also makes Burners for Domestic Boilers, Heating Boilers and Power Boilers. Write for illustrated literature!

JOHN ZINK COMPANY

4401 South Peoria

Tulsa, Oklahoma

To All Dealers . . . NATIONAL Presents

Another great selection of up-to-the-minute merchandise—tailored to meet public demand in the 1950 market.

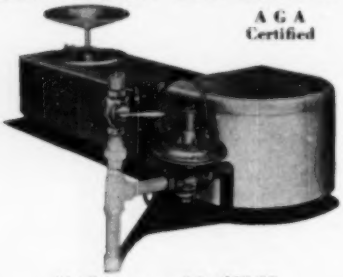
NATIONAL always gives you the Big 3

QUALITY SERVICE VALUE

CHILL AIR
Portable Fan for Window, Floor or Desk. 16", 3 speeds.

List Price, $34.95

NATIONAL AUTOMAT CONVERSION GAS BURNER
A G A Certified

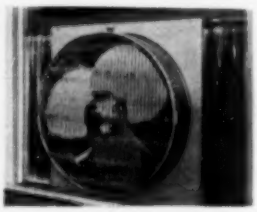


List Price—complete, $99.95

CHILL AIR
Roll-A-Bout Fan

20". 3 speeds.
List Price, $69.95

CHILL AIR
Turn-A-Bout Window Fan

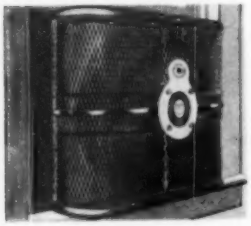


20", 3 speed reversible, $59.95
16", 3 speed reversible, 39.95
20", 3 speed exhaust only, 49.95

CHILL AIR
Recirculating Pump

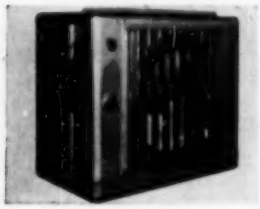
List Price, $13.50
Pump Kit, 18.00

CHILL AIR
Window Exhaust Fan (Conventional type)



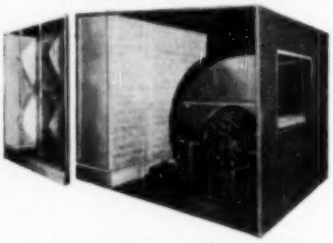
20", 3 speed, $59.95
16", 3 speed, 44.95

CHILL AIR
Evaporative Window Cooler



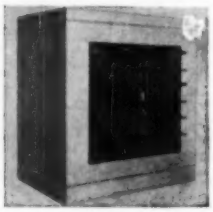
List Price, $49.95

CHILL AIR
Heavy Duty Blower and Mat Washer



Capacities 10,000 to 90,000 CFM

CHILL AIR
Commercial Cooler 3500 to 13,500 CFM



Lists from $149.95 up

To Distributors A few territories still open

NATIONAL ENGINEERING & MFG. CO.

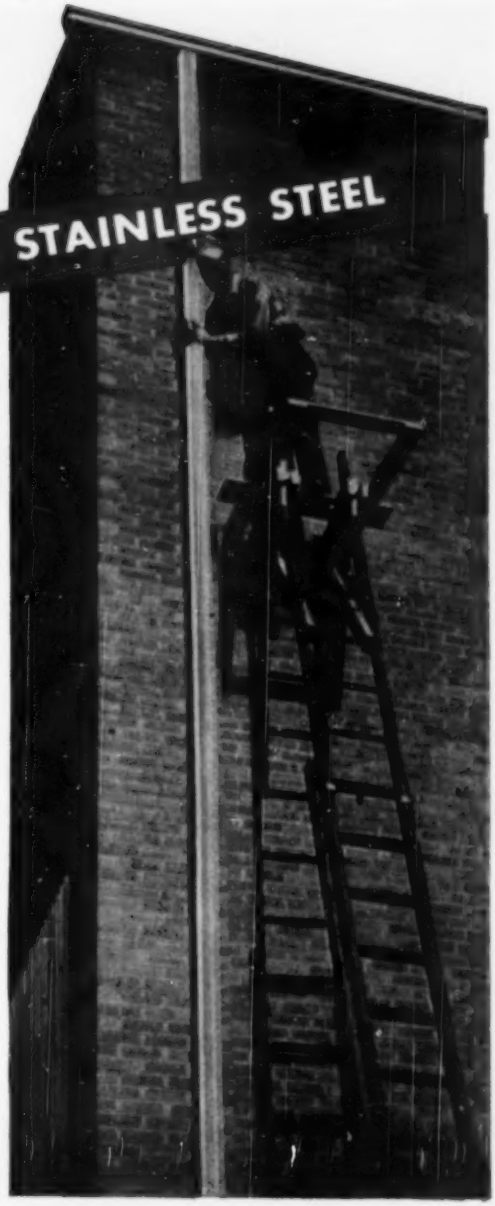
519 Wyandotte **Kansas City, Missouri**

To Dealers Write for literature and discounts A Distributor will supply you.

If you want to give your customers

" the FINEST in roofing products"

BUILD WITH U·S·S STAINLESS STEEL



Won't rust or corrode . . . will not discolor or stain walls . . . never needs painting . . . lasts as long as the building . . . first cost is final cost

You don't have to sell people on the advantages of Stainless Steel—everyone knows it is unsurpassed for beauty, durability and permanence. But when you suggest Stainless Steel for gutters, downspouts, flashings and other roofing accessories, the first thing they are likely to say is "Sounds fine, but can we afford it?"

Right there you've got a customer. Because the answer is "Yes." For, generally speaking, the cost of a well-designed job made with the proper grade and finish of U·S·S Stainless will be little or no higher than the cost of the better grades of roofing products—none of which can match Stainless for strength or corrosion resistance.

That's because Stainless Steel can be used in relatively thin sections without sacrifice of durability. And because it costs nothing for replacement or maintenance, Stainless Steel in the long run is by far the most economical material.

U·S·S STAINLESS STEEL IS EASY TO FABRICATE AND EASY TO INSTALL

The U·S·S Stainless recommended for the most applications is so light yet so strong that gutters and downspouts can be fabricated in extremely long lengths which are so rigid that they handle easily and thus greatly simplify and speed up installation. Fabrication of these comparatively simple forms presents no special problems, requires neither special shop procedures nor special equipment.

U·S·S Stainless Steel sheet and strip are readily available now. The proper grade—U·S·S 18-8, Type 302—is stocked by most warehouse suppliers and by United States Steel Subsidiaries.

AMERICAN STEEL & WIRE COMPANY, GENERAL OFFICES: CLEVELAND, OHIO · CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH & CHICAGO
COLUMBIA STEEL COMPANY, SAN FRANCISCO · NATIONAL TUBE COMPANY, PITTSBURGH · TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
UNITED STATES STEEL SUPPLY COMPANY, WAREHOUSE DISTRIBUTORS, COAST-TO-COAST · UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS

U·S·S STAINLESS STEEL

SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

9-1402

UNITED STATES STEEL

...and now
The HORIZONTAL
Brundage AIR-RENEWER

FRESH AIR CLEAN AIR—PROPERLY HUMIDIFIED—BACTERIA FREE

For the forced warm air furnace a ceiling type (horizontal) Air-Renewer has been created. Air humidification, purification and cleaning can be had by installing the glycol-filter compartment unit (illustrated below) with any heating or cooling system where a blower is already an integral part of the system. It is completely factory assembled, space saving and dollar saving to your customer. This low cost, easily installed unit, employs a simple, positive, trouble-free mechanical process.

Get all the facts now about this fast-growing market. Learn how you can make bigger profits in 1950 installing complete indoor living comfort — the Brundage Air-Renewer!

AIR CIRCULATION

Where a blower is not part of the system a 700 Series Vertical Model (Floor Type) may be used, or a matching blower compartment may be added to the horizontal Air-Renewer.

HORIZONTAL
Model 1713GL
AIR-RENEWER

Brundage COMPANY

Blower Specialists Since 1919

501 NORTH PARK STREET
KALAMAZOO 12, MICHIGAN

Typical installation, with a 100,000 B.T.U. forced warm air furnace.

Thousands have written for this booklet

PRODUCT *plus* PROMOTION = A Great BIG difference to the dealer with the WILLIAMS OIL-O-MATIC OIL BURNER franchise

Model 70 Winter Air Conditioner

☆

Model Fifty-Ten Oil Burner

YOU SHOULD HAVE THE WILLIAMS OIL-O-MATIC STAR WINTER PROGRAM ON *YOUR* SIDE OF THE SALE!

Factory leads, factory follow up, team work *all along the line* turns "suspects" into *prospects* and Winter SALES!

ROTOGRAVURE ADS, MAGAZINE ADS, COOP ADS (on a liberal plan), booklets, signs, tested plans and ideas are *already* working for Oil-O-Matic dealers this winter.

This is the greatest winter selling program ever seen in the Oil Heat Industry . . . and sales are being made *now, today!* You should be in on it . . . it means profits to you this winter. Mail coupon today for full details.

A few dealer territories are available in our expanding dealer organization. Send coupon today for all facts.

NOW MORE THAN EVER OIL-O-MATIC DEALERS HAVE THE INDUSTRY'S BEST FRANCHISE

BURNS ANY DOMESTIC FUEL OIL!

Pittsburgh Testing Laboratory tests have proved Oil-O-Matic's ability to burn either a No. 1 Oil or a 100% catalytically cracked oil with equal ease and efficiency

COMPLETE UNITS · OIL BURNERS

. . . for Homes of all sizes
. . . for all types of Heating

WILLIAMS OIL-O-MATIC DIVISION
Eureka Williams Corporation
BLOOMINGTON, ILLINOIS

TODAY MAIL COUPON FOR PROFIT MAKING INFORMATION

WILLIAMS OIL-O-MATIC DIVISION
Eureka Williams Corporation
Bloomington, Illinois

Yes! We want to know *all about* the BIG difference a real winter activity makes—and the advantages of the OIL-O-MATIC dealer Franchise.

NAME _____

ADDRESS _____

CITY _____ STATE _____

AA-1

Whether your product pops corn...

OR MAKES COFFEE, OR STOWS SPICES, OR WHATEVER . . .

Your nearby Kaiser Aluminum Distributor will stock *your* warehouse requirements of Kaiser Aluminum. In addition, he'll help you work out a program to make your inventory more versatile, your raw materials investment lower, your handling costs less, your space requirements smaller.

He can provide *any* warehouse quantity of light, strong, rust-proof Kaiser Aluminum: Large orders for making mass-produced items—or smaller orders for fill-in items or for just-getting-started products and experimental work.

He's ready, too, to give you expert engineering help, if you want it. His service is the kind that's made him one of the nation's leading materials suppliers.

You'll find the name of your nearest Kaiser Aluminum Distributor listed below. Call him now. You'll learn there are *many* ways he can help you!

Kaiser Aluminum is produced by Kaiser Aluminum & Chemical Corporation

THIS IS THE POPEX—made by Popex, Inc., Cincinnati, Ohio. Brain child of Mr. Glenn T. Schmidt and Mr. E. G. Beckemeyer, it is designed for popcorn eaters who like their home appliances attractive, economical, efficient. Special sizes of coiled sheet and circles are carried in stock for Popex by the Kaiser Aluminum Distributor in Cincinnati.

Kaiser Aluminum

FOR WAREHOUSE QUANTITIES, CALL YOUR LOCAL KAISER ALUMINUM DISTRIBUTOR

ATLANTA, Georgia
Morrison-Drabner Steel Co.
82-84 Milton Avenue
Alpine 4885

BALTIMORE, Maryland
The Hill-Chase Steel Company of Maryland
6311 Erdman Avenue
Peabody 7300

CINCINNATI, Ohio
Morrison-Drabner Steel Co., Inc.
1074-1084 Summer Street
Wabash 4480, 4481

CLEVELAND, Ohio
Nottingham Steel Company
West 45th St. & Division Ave.
Atlantic 3100

DETROIT, Michigan
Cauhorn Distributing Company
9999 Broadstreet
Hogarth 3838

Copper & Brass Sales, Inc.
3000 East Woodbridge
Lorain 7-3380

EVANSTON, Illinois
Karhumel, Heffron & Preiss Steel Co.
2424 Oakton Street
Ambassador 2-6700

FRESNO, California
Clingan & Fortier, Inc.
1960 H Street
Phone 2-2164

HONOLULU, T. H.
Permanente Cement Co.
Pier 32, P. O. Box 79
Telephone 5-2541

INDIANAPOLIS, Indiana
F. H. Langsenkamp Company
229 East South Street
Riley 9311

KANSAS CITY, Missouri
Industrial Metals, Inc.
403 East 18th Street
Victor 1041 or Victor 1042

LOS ANGELES, California
Permanente Products Company
Warehouse Division
551 East Macy Street
Mutual 7286

MILWAUKEE, Wisconsin
KHP Milwaukee Steel Company
1550 South First Street
Evergreen 3-5800

MINNEAPOLIS, Minnesota
Karhumel, Heffron & Preiss Steel Co.
3225 Como S. E.
Gladstone 5943

NEW ORLEANS, Louisiana
The Orleans Steel Products Co., Inc.
1019-1025 Bienville Street
Raymond 2116

NEW YORK, Metropolitan Area
A. R. Purdy Company, Inc.
Page Avenue & Orient Way
Lyndhurst, New Jersey
Lyndhurst: Rutherford 2-8100
New York: Chelsea 3-4455
Newark: Humboldt 2-5566

OAKLAND, California
Gilmore Steel & Supply Company
1960 Cypress
Glencourt 1-1690

OMAHA, Nebraska
Gate City Steel Works
11th and Howard
Atlantic 1830

PHILADELPHIA, Pennsylvania
Hill-Chase & Company, Inc.
Trenton Ave. & Ontario St.
Delaware 6-5400

PHOENIX, Arizona
Arizona Hardware Co.
47 E. Jackson Street
Phone 3-3111

PORTLAND, Oregon
Eagle Metals Company
809 Dekum Building
Atwater 4962

SAN FRANCISCO, California
Clingan & Fortier, Inc.
1526 Wallace Street
Mission 7-0206

Gilmore Steel & Supply Company
840 Brannan Street
Klondike 2-0511

SEATTLE, Washington
Eagle Metals Company
3628 East Marginal Way
Eliot 4764

SPOKANE, Washington
Eagle Metals Company
E. 41 Gray Street
Main 2419

WICHITA, Kansas
General Metals Mfg. Co., Inc.
218-220 South Wichita
3-4314, 3-2373

KAISER ALUMINUM & CHEMICAL SALES, INC., KAISER BLDG., OAKLAND, CALIF. • OFFICES IN MAJOR CITIES

GENERAL CONTROLS
Cordially invites you to visit
BOOTHS NO. 264-266
at the
SOUTHWEST AIR CONDITIONING EXPOSITION
of the
International Heating & Ventilating Exposition*
Controls will be exhibited — Staff Engineers in attendance
JANUARY 23-27, 1950—STATE FAIR GROUNDS—DALLAS, TEX.
*Auspices ASHVE

for the best in AUTOMATIC CONTROLS

Wherever there is a *need for automatic controls* . . . in heating, refrigeration, aircraft or industry . . . whether for product or process . . . there is a *better* General Control for the job. So whatever your *control problem*, check with General Controls first. Contact us at the Dallas Convention . . . at the Factory or any of the 21 Factory Branch Offices conveniently located from Coast-to-Coast. And remember . . . that in the field of Automatic Controls . . . General Controls *do more* and *cost less!*

check this complete line!

GENERAL CONTROLS

FACTORY BRANCHES: Baltimore (5), Birmingham (3), Boston (16), Buffalo (3), Chicago (5), Cincinnati (2), Cleveland (15), Dallas (1), Denver (4), Detroit (8), Glendale (1), Houston (6), Kansas City (2), Minneapolis (2), New York (17), Philadelphia (40), Pittsburgh (22), San Francisco (7), Seattle (1), St. Louis (12), Tulsa (6). DISTRIBUTORS IN PRINCIPAL CITIES.

Manufacturers of Automatic Pressure, Temperature, Level and Flow Controls

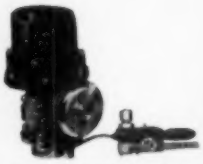
DON'T MISS THIS

GET THE BIG NEWS FIRST HAND

...on the FULL Line of AP DEPENDABLE Controls for OIL • GAS • COAL-FIRED Furnaces and Appliances. *SEE THEM ALL*

A-P MODEL 346 OILIFTER Automatically "lifts" oil from bulk storage to ANY appliance as high as third story.

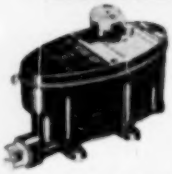
A-P MODEL 162 SOLENOID GAS VALVE SET With NEW Non-gumming Solenoid.



A-P MODEL 54 GASAPACK Replaces 5 or more separate units. Automatic used with Thermostat and Transformer.

A-P MODEL 54 APG MANUAL GASAPACK Control for Gas Heaters and Furnaces—100% safe.

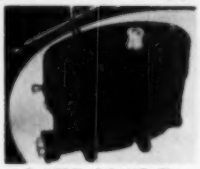
A-P COMFORT MASTER Automatic Heat Regulator Set, with Combined Damper Regulator and Limit Control, Heat-Anticipating Thermostat, and Field Barometric Check Damper.



A-P MODEL 240-Y SERIES Safety Oil Controls—for single or double burners, end or side inlet.

A-P MODEL 240-GYR CONTROL for Floor Type Furnaces.

A-P MODEL 240-TOYR Thermo Oven Control for Ranges.



A-P MODEL 240-WYP Thermostatic Hot Water Heater Control for mobile units.

A-P MODEL 240-GYRM FURNACE CONTROL with built-in limit feature.

UNAPAC "SIX-IN-ONE" Complete Furnace Control. Has facilities for ALL furnace functions in one easily-installed, compact, low-priced unit.

A-P MODEL 252-A Control for Trailer Heaters.

A-P COMFORT MASTER MODEL 240-BD Electric Conversion Set. Provides Thermostatic Heat Regulation for Heaters using A-P Model 240-D, U, or Y Series Controls. (COMFORT MASTER Sets also available for furnaces, floor furnaces and trailer heaters.)

A-P FUEL OIL TRAP-IT Improves burner operation by keeping oil free from impurities.

Millions Know the Satisfaction of **DEPENDABLE Controls** FOR HEATING . . . AIR CONDITIONING . . . REFRIGERATION

Millions Know the Satisfaction of **DEPENDABLE Controls** FOR HEATING . . . AIR CONDITIONING . . . REFRIGERATION

Controls ING . . . REFRIGERATION

"the new

royal jet-flow

has increased my profits 41%

"...it is the easiest to sell...

easiest to install of any full size

heating unit on the market."

This is a typical report from a

satisfied Jet-Flow dealer.

Dealerships are open in certain

areas. If you want to increase

your profits with this inexpensive

gas-fired heating unit we

suggest you write, or phone us

collect for complete information.

phone CUmberland 32117

royal heaters, inc.

Alhambra, Calif.

Royal Jet-Flow comes complete in one package – can be painted or papered. Gives forced air performance – yet costs no more installed than an ordinary floor furnace.

over 50,000 royal jet-flows installed in houses built by america's largest builders

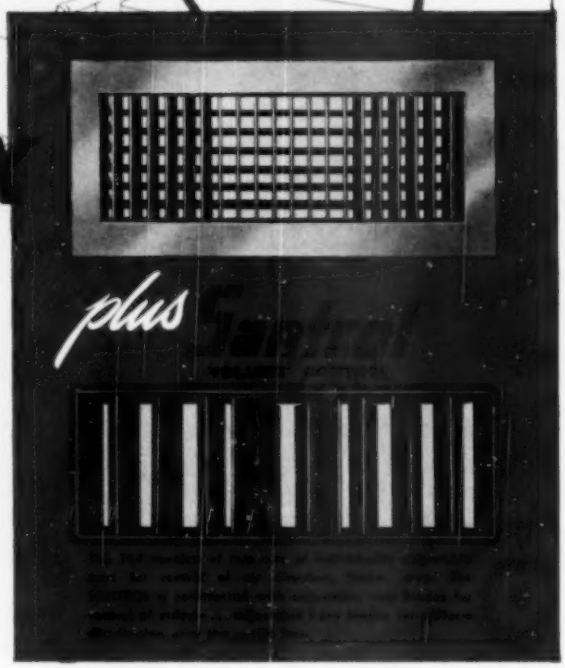
Letters from some of the largest builders with hundreds of Jet-Flows installed are sound proof of the exceptional qualities of the unit.

"... Royal Jet-Flow is the perfect answer for modern homes" **Fritz Burns, Kaiser Community Homes.** "... a remarkable development in home heating ... giving the small home owner the type of heat heretofore available only in a high cost home" **M. J. Brock, M. J. Brock & Sons, Inc.** "... this superior heating equipment places us at a distinct advantage in today's competitive market" **J. R. Ashton, Del E. Webb Construction Co.**

Maximum Control of Air Delivery at the *Critical point*

Tri-Flex

DOUBLE DEFLECTION T64 GRILLE



In the majority of air conditioning installations, 4-way control of supply air is essential to satisfactory performance of the system. TRI-FLEX Double Deflection T64 Grilles with SANTROL Volume Controls provide a convenient means of controlling the air volume and the direction, throw and drop of the air stream to meet specific job requirements.

Be sure of your next job...specify and install the all-purpose combination that assures complete, flexible control *at the Critical Point!*

See Our Exhibit
Booth No. 311
Southwest Air Conditioning Exposition
Dallas—Jan. 23 to 27

TUTTLE & BAILEY inc

NEW BRITAIN, CONNECTICUT

WHAT OTHER HEATING METHOD

can match

all THESE BENEFITS ?

DRAVO *Counterflo* HEATERS

are today's "Best Buy" in Open-space Heating—

★ **LOW FIRST COST** . . . Users report savings of 50% to 65% over standard wet-type systems.

★ **WORKING-ZONE WARMTH** . . . Units heat areas of 4,000 to 20,000 sq. ft. each. Roof heat loss greatly reduced.

★ **NO FUEL WORRIES** . . . Burn oil or gas—readily converted from one to other.

★ **LOW OPERATING COST** . . . 80-85% efficiency at bonnet *plus* top efficiency in heat distribution holds costs down.

★ **AUTOMATICALLY CONTROLLED** . . . On-off or modulating controls. The heater looks after itself—no continuous attention needed.

★ **EASY INSTALLATION** . . . Just hook up fuel, electric and exhaust connections—and the heater is ready to go.

★ **LONG LIFE—LOW MAINTENANCE** . . . Stainless steel combustion chamber, rugged mill-type construction, top-drawer engineering.

★ **TESTED—APPROVED** . . . AGA and/or UL seal on all standard units. Each heater flame-tested at factory before shipment.

★ **AVAILABILITY** . . . Heaters are stocked, ready for immediate delivery. No delays.

FOR FULL INFORMATION . . . DROP A CARD
OR A LETTER FOR BULLETIN BC-523-2

DRAVO
CORPORATION
DRAVO BUILDING, PITTSBURGH 22, PA.

Dravo also manufactures the DRAVO CLEAN GAS COOLER for air conditioning hot-metal crane cabs.
PITTSBURGH · CLEVELAND · PHILADELPHIA · DETROIT · NEW YORK · CHICAGO · ATLANTA · BOSTON
Sales Representatives in Principal Cities · Also, and Sold in Canada by Marine Industries, Ltd., Sorel, Quebec

DRAVO

FAMOUS

WISS metal cutting snips

for every purpose

INLAID BLADE COMBINATION SNIPS

Made with straight blades, but ground and shaped so they readily cut curves and irregular shapes as well as straight. 2 sizes—12½" and 13½" long.

INLAID BLADE STRAIGHT CUTTING SNIPS

The basic snips for straight metal cutting. Gun metal finish handles. Tough crucible steel inlaid blades. Popular because of cutting ease and long life. 5 sizes from 9½" to 14½" long.

METAL MASTER SNIPS

Outstanding new development in snip design and construction. Compound leverage produces amazing cutting power with minimum effort. A set of 3 snips, M-1, M-2 and M-3 takes care of the most intricate jobs involving inside holes, circles, complicated patterns, etc. Rubber grips recommended.

INLAID BULLDOG HEAVY-DUTY SNIPS

For cutting monel metal, stainless steel, Allegheny metal and other tough alloys. Invaluable for bench work for cutting strap iron bands. Regularly tested on 18-gauge galvanized iron. 17" long, 2½" cut.

V19 COMBINATION CUTTING SOLID STEEL SNIPS

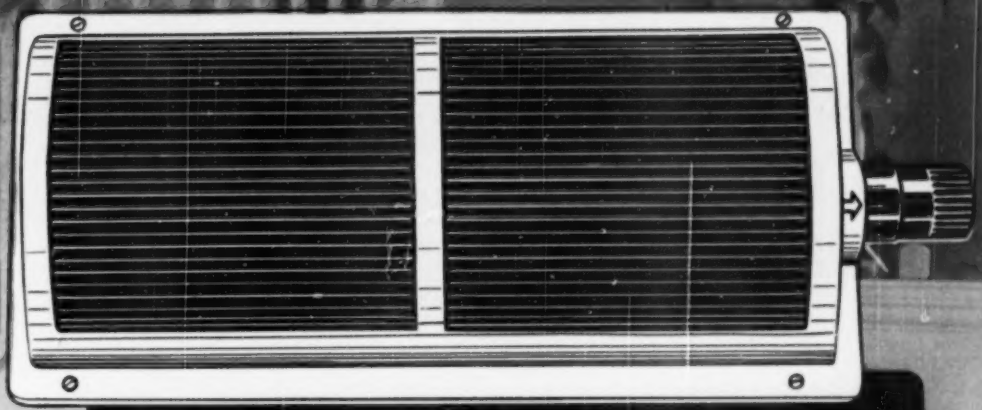
Strong, well made, solid steel combination pattern snips. Will cut curves and irregular shapes with ease. Accurately tempered jaws and strong bolts. 13" long, 3" cut. No. V13 is handy pocket size, 7" long, 1⅝" cut.

STRAIGHT CUTTING SOLID STEEL SNIPS

For workers who do not need the special qualities of WISS inlaid snips. They meet government specifications. For garages, machine shops, home workshops, the farm, etc. 4 sizes from 8" to 12¼" long.

Quality for more than a century

J. WISS & SONS CO., NEWARK 7, NEW JERSEY



NOW TWICE AS EASY TO SELL!

Still new, after their introductory year, Dole Thermostatic Air Controls now pass along to you the economies of quantity production—Still the same astonishing sales story, now confirming Dole's years of tests over and over again in actual installations: Comfort control in individual rooms by continuous sampling of room air temperature—Control over the complete forced warm air system for balanced heating and fuel economy.

At the new low suggested list of $15 each, homes with forced warm air can enjoy all the advantages of zone control at very modest cost—a thermostat in every room. Get going on Dole Controls and they'll boost your business.

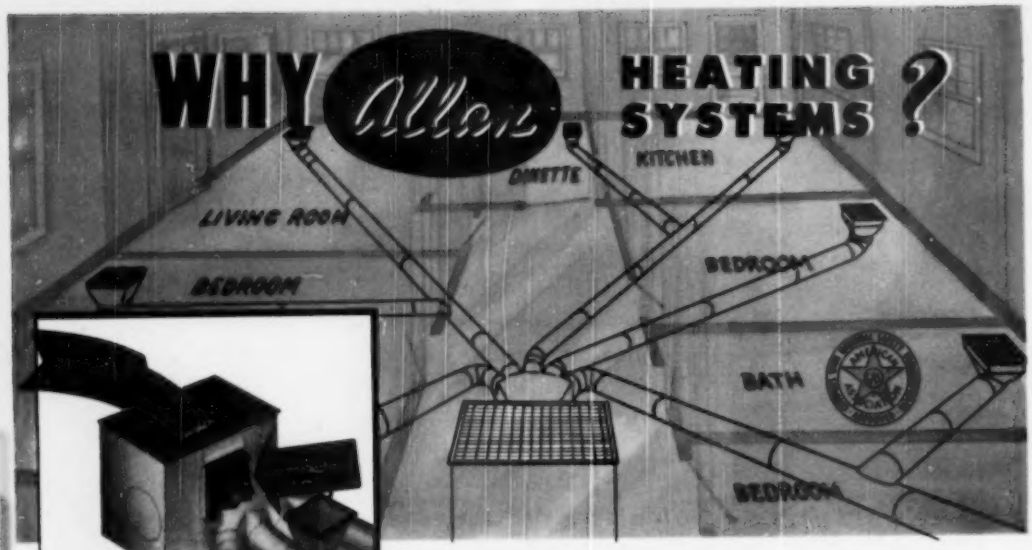
AUTOMATIC Individual Room Temperature CONTROL . . . Simply Set the Dial For Millions of New or Old Forced Warm Air Systems

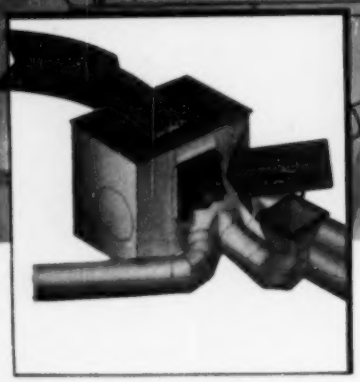
DOLE

THERMOSTATIC AIR CONTROLS

THE DOLE VALVE COMPANY, [illegible] Garfield Avenue, Chicago 1[illegible]
[illegible]

CONTROL WITH DOLE





- No hot grilles or cold floors—safe for children
- No stuffy air, gas fumes, odors, or open flame
- Low FIRST cost and OPERATING cost—economical always
- Distributes heat evenly to every room
- Maintains uniform temperature (by thermostat)
- Comes in complete package ready for quick installation

Learn about Allan advanced engineering . . . quality manufacturing . . . easy installation . . . reliability, and low cost. Then you'll know

"WHY Allan Heating Systems"

PAP designates the unique Allan Forced-Air-Floor central heating systems. Thousands of installations during the past 12 years prove its safety, economy and effective operation. The furnace can be installed in floor of hallway or other convenient spot . . . 8-inch duct work requires minimum clearance under joists. No basement or closet required. FAF especially adapted to homes already built. Standardized systems of plenum chamber, duct work, and registers enable salesmen to estimate and secure order on first call.

- Especially adaptable to G.I. (type) homes
- Economical to install and operate
- Ducts run under floor or in concrete floor
- Heats every room evenly

Economy plus utility equal **Allan**

CABINETTE

Central Heating System

The Cabinette model offers utmost in economy, safety, and convenience. Ideal for homes or small buildings with virtually no clearance under floor-joists or with concrete floors. Can be installed in hallway, kitchen, closet, etc. Its 36-inch height above floor and the flat top give a "table-top" useful to housewife. Air is kept active and healthful . . . even temperature maintained by thermostatic control.

FOR FULL DETAILS WRITE TO

Allan

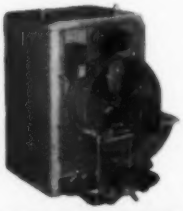
OVER-HEAD HEATING UNIT

Automatic Out-of-Way Heat

1000 RPM resilient-base, silent motor

- May be vented directly through roof
- 100% Safety
- Directional Louvres

Designed primarily for commercial and industrial installations where immediate, effective and constant heat is essential. Rugged construction assures long life. Case is 20-gauge, cold-rolled steel with finish of grey-metallic baked enamel (hammered finish).



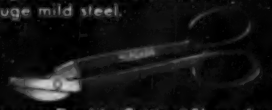
Manufacturing Co.

NIAGARA

BUYER'S GUIDE
FOR SHEET METAL WORKERS

● The hand tools shown on this page are just a few of the hundreds of machines and tools which are helping sheet metal workers do better work with less effort and lower cost. Men who take pride in their work find there is economy in Niagara proven high quality. Niagara has been a *quality name* since 1879. Ask your dealer or write for information in regard to America's most complete line of machines and tools for plate and sheet metal work.

Niagara Extra Heavy Snips cut 16 gauge mild steel.

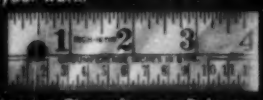


Niagara Double Cutting Shear for cutting cylinders to length.

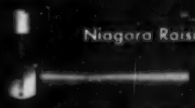
Niagara Bench Shear for heavy duty hand shearing.

Niagara Bench Plate for rigidly mounting stakes, bench shears, etc.

Niagara Straight Edge for accurate layout work.

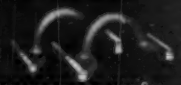


Niagara Circumference Rule graduated in inches and circumferential equivalents.

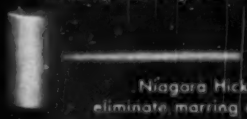


Niagara Raising Hammer for convex or concave forming.

Niagara Gutter Beaders designed for convenient operation.

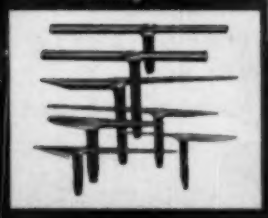


Niagara Hand Seamers for finishing standing seams on roofing.



Niagara Hickory Mallets eliminate marring of material.

Niagara Stakes made in a complete line of essential shapes and sizes.



Niagara Wood Roofing Folder for light weight, low cost folding.

Niagara Pipe Crimper for thicknesses up to 22 gauge.

Niagara Handy Tongs for bending light sheet metal in the shop or on the job.

Niagara Hollow Punch for punching round holes in light sheet metal.

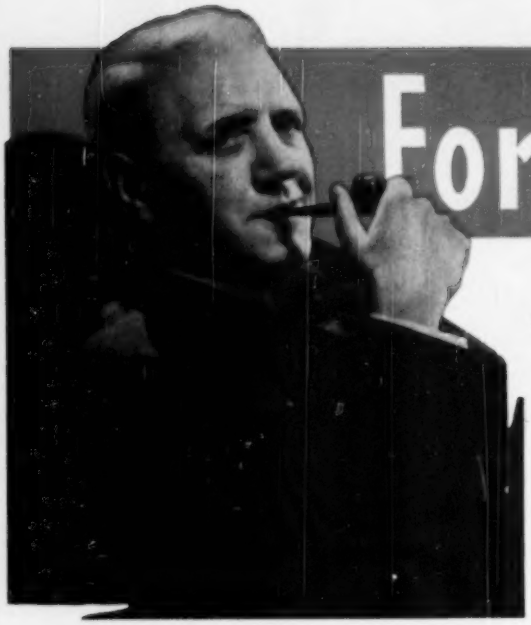
Niagara Grooving Tool for flattening and offsetting folded edges to finish lock seams.

Niagara Rivet Set made of alloy tool steel, heat treated.

Niagara Riveting and Setting Hammers have forged steel heads, heat treated, polished and fastened to handle with steel wedges.

NIAGARA MACHINE & TOOL WORKS • BUFFALO 11, NEW YORK

DISTRICT OFFICES: DETROIT • CLEVELAND • NEW YORK



For PROFIT..

"FOR YEARS I HAVE BEEN MAKING MORE PROFIT WITH DOWAGIAC... And always running my own business!"

● "You can't beat the solid, lasting prosperity I enjoy with the Dowagiac Plan. Like the other Dowagiac dealers, I give my customers the very *highest* quality in product . . . at prices that meet or beat competition . . . and *make a higher unit profit for myself!* Sounds impossible? Not when you know the facts! Send the coupon on facing page . . . or a card or letter . . . for complete details of the Dowagiac Plan."

DOWAGIAC

Steel Furnace Company

DOWAGIAC MICHIGAN

You Get All This:

★ FINEST QUALITY PRODUCT ★ FAMOUS NAME PRESTIGE
★ FULL LINE OF TYPES AND SIZES ★ TOP VALUE TO CUSTOMERS
★ PRICES BELOW COMPETITION

Plus THIS IMPORTANT "EXTRA"

AN ENTIRELY DIFFERENT, MORE PROFITABLE MODERN SALES METHOD AND POLICY

it's the Plan that Counts!

ONLY DOWAGIAC OFFERS THIS COMBINATION OF FINE PRODUCT AND DIRECT SALES PLAN!

Search the market. You can't find better-engineered, more efficient, or more ruggedly-built furnaces, winter air conditioners, and water heaters than DOWAGIAC. You'll find models for all fuels . . . A full line of sizes . . . Standard round casings, or modern enameled casings like the one at right.

But here's the difference: *You* BUY *this famed line better, so you can* SELL *it better*. It's as simple as that! You buy direct from the factory, and the important savings are passed on to YOU, in the form of lower prices, and higher profits.

Oil and electric water heaters . . . Every DOWAGIAC unit is a BIG VALUE in customer satisfaction.

Complete line for all Fuels

- FURNACES
- WINTER AIR CONDITIONERS
- WATER HEATERS

As a First Step, get the Information about the Complete DOWAGIAC Plan

Don't wait another day before you test the truth of this amazing advertisement. It costs you only 3c to find out how we can do it—and how YOU can make MORE PROFIT for yourself, while at the same time giving your customers a *better break than ever!*

MAIL COUPON FOR DETAILS

DOWAGIAC STEEL FURNACE COMPANY
DOWAGIAC, MICHIGAN

Gentlemen:
Without obligation, please send the full details about how we can make *bigger profits* with the Dowagiac Plan.

(FIRM NAME) _____

(INDIVIDUAL) _____

(ADDRESS) _____

(CITY) _____ (ZONE) _____ (STATE) _____

THE VALUE OF

Good Will

IN YOUR BUSINESS . . . in our business . . . in any successful business, good will is a basic requirement.

Bred of the same quality which caused the wilderness to be penetrated, the frontier to be pushed back, and the nation to be built, American Business seeks to discover the unknown, see beyond the dim light of doubt, and, achieving one thing impossible, seek yet another.

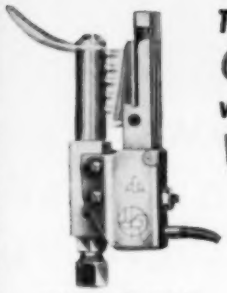
Vested with the inherent determination to improve his lot, man works mind, method, and product to the mold of success and the concept of good will. Just as the measure of success is relative, shifting with the time and place, so the value of good will is immeasurable. Applied to individual or product, good will is that intangible factor which instills confidence, governs decisions and sponsors progress. On the balance sheet it appears as $1.00. In reality its value can be millions. It is virtually the life blood of good business, whether it be your business or our business.

In buying heating equipment as in buying anything the best assurance of satisfaction rests with the good will of the name. Norge Heat of Borg-Warner invites you to evaluate and compare.

NORGE HEAT of Borg-Warner Corporation

672 East Woodbridge, Detroit 26, Michigan

Complete Line of Oil • Coal • Gas Fired Heating Equipment



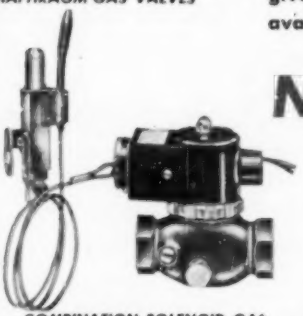
GAS SAFETY PILOTS

Take care of all your GAS CONTROL NEEDS with this outstanding line of WHITE-RODGERS GAS CONTROLS!

NOW, from one dependable source, you can count on getting *all* of the controls you need for gas heating. Room Thermostats, Hydraulic-Action Limit Controls, Fan and Circulator Controls as well as Valves and Safety Pilots are available for every application.

In individual and combination units, embodying exclusive features you cannot find anywhere else, the White-Rodgers line of gas-heating controls is ideal both for the manufacturer and the utility—and gives the user advantages never before available. Ask about them—write today!

DIAPHRAGM GAS VALVES



COMBINATION SOLENOID GAS VALVE AND SAFETY PILOT

NEW!

These new compact-size diaphragm gas valves are quieter, simple to install and are ideal for replacement use because length dimensions are the same as solenoid valves. Ask for new circular giving full details.

4" DIAMETER DIAPHRAGM VALVE

WHITE-RODGERS
ELECTRIC CO. ST. LOUIS 6, MO.

Controls

FOR REFRIGERATION · HEATING AND AIR CONDITIONING

Announcing The New A.G.A. Approved

ZEPH-AIR

CAST IRON FURNACE AT A COMPARABLE PRICE TO THE BEST GRADE STEEL UNIT ON THE MARKET

- WITH A 20 YEAR WARRANTY AGAINST CRACKING AND BURNING OUT (NOT MERELY AGAINST DEFECTIVE WORKMANSHIP AND MATERIALS). BACKED BY 55 YEARS OF CONTINUOUS SERVICE.
- ALL EQUIPPED WITH MINNEAPOLIS-HONEYWELL CONTROLS.
- OVERSIZED BLOWERS DESIGNED TO GIVE MAXIMUM QUIET OPERATION.
- EXCLUSIVE FRANCHISE DEALERSHIPS STILL AVAILABLE—WRITE FOR COMPLETE PLAN.
- COMPLETE LINE OF GAS, OIL AND COAL FURNACES.

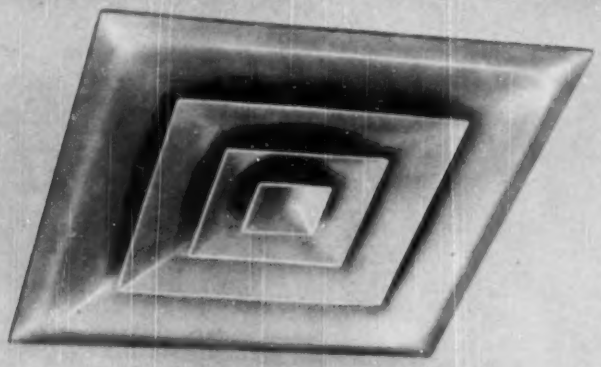
XXTH CENTURY HEATING & VENTILATING CO.
AKRON, OHIO

UNITED STATES STEEL SUPPLY COMPANY

Warehouses: BALTIMORE · BOSTON · CHICAGO
CLEVELAND · LOS ANGELES · MILWAUKEE · MOLINE, ILL. · NEWARK · PITTSBURGH
PORTLAND, ORE. · SAN FRANCISCO · SEATTLE · ST. LOUIS · TWIN CITY (ST. PAUL)
Also Sales Offices at: KANSAS CITY, MO. · PHILADELPHIA · TOLEDO · TULSA · YOUNGSTOWN
Headquarters Offices: 208 S. La Salle St.—Chicago 4, Ill.

USS

UNITED STATES STEEL



NOW!

When Specifications Call For SQUARE Air Diffusers

You Can Install ANEMOSTAT AIR DIFFUSERS

When air diffuser specifications read "square", you can now give your customers the new square Anemostat Air Diffusers. They offer the same aspiration effect—the same draftless, uniform distribution of air—as the circular Anemostats. These new Square Diffusers, protected by patents, assure complete air diffusion *over a full 360° area.*

The new square Anemostats are available in two basic models. Type E fits without modification into the framework that holds standard size acoustical and egg crate ceilings. Type E-1 is flanged to cover the opening in a regular ceiling.

The simple snap-on method of installing these new square Anemostat Air Diffusers will save you time and labor. Both inner assembly and equalizing deflectors are just snapped into place.

Now you can install square—as well as circular and semi-circular Anemostat Air Diffusers — and be sure of top-quality performance. For full information on the new square Anemostat, write for Bulletin 29A. Bulletins on other types of Anemostats available on request.

ANEMOSTAT®

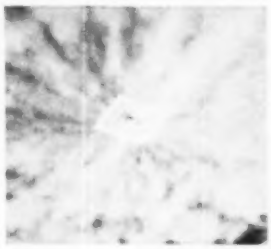
DRAFTLESS *Aspirating* AIR DIFFUSERS

ANEMOSTAT CORPORATION OF AMERICA
10 EAST 39th STREET, NEW YORK 16, N. Y.
REPRESENTATIVES IN PRINCIPAL CITIES

"NO AIR CONDITIONING SYSTEM IS BETTER THAN ITS AIR DISTRIBUTION"

AC 1239

ANEMOSTAT OFFERS COMPLETE CIRCULAR DIFFUSION *from a square outlet*



This unretouched smoke test photograph shows how the new square Anemostat diffuses air completely over a 360° area.

Only Anemostat provides effective aspiration

Due to its special design, the Anemostat distributes air of any duct velocity in a multiplicity of planes traveling in all directions. Simultaneously, the unit creates a series of countercurrents traveling toward the device which siphon into the device room air up to 35% of the supply air depending on the type and size of the unit. This room air is mixed with the supply air within the Anemostat before the air mixture is discharged into the enclosure.

THATCHER... *the oldest name in heating*

A hundred years in heating! That's right – this year Thatcher rounds out a full century of producing heating equipment. A hundred years of building a dependable, *highly sell-able* consumer name...a hundred years of close-knit cooperation with dealers and jobbers...a hundred years of devoting *all* its production and research facilities, engineering research, and unequalled experience to this one field!

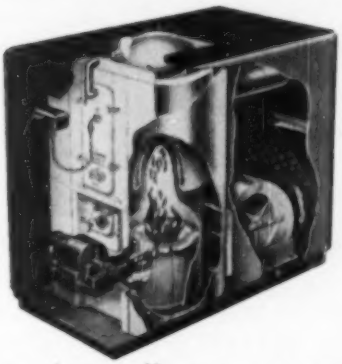
offers you new profit potentials for 1950

With a complete line of fuel-saving, customer-making Thatchers. Here's a good example – the V Series Oil-Fired Comfortmaster:

★ Flange-Mounted Oil Burner, Durable Steel Heat Extractor ★ Automatic Vaporizing Humidifier ★ Pre-Cast Combustion Chamber

★ Model BV-116: 90,000 BTU at register. Dim: 46" x 55" x 30"

★ Model BV-120: 140,000 BTU at register. Dim: 50" x 65" x 35¼"



Thatcher FURNACE COMPANY

GARWOOD, NEW JERSEY

A-204 Oil-Fired Winter Air Conditioner

New Comfort-master Gas-Fired Winter Air Conditioner

481 Series All-Purpose Winter Air Conditioner

C-174H Coal-Fired Forced Air Furnace

492 Series Oil-Fired Winter Air Conditioner

Oilmaster Automatic Oil-Fired Boiler

491 Series Gas-Fired Hi-Boy

Specialists in Heating since 1850

THATCHER FURNACE COMPANY, Dept. A-1,

Garwood, New Jersey

☐ Please send literature on the new Thatcher V series.

☐ Please have your salesman call.

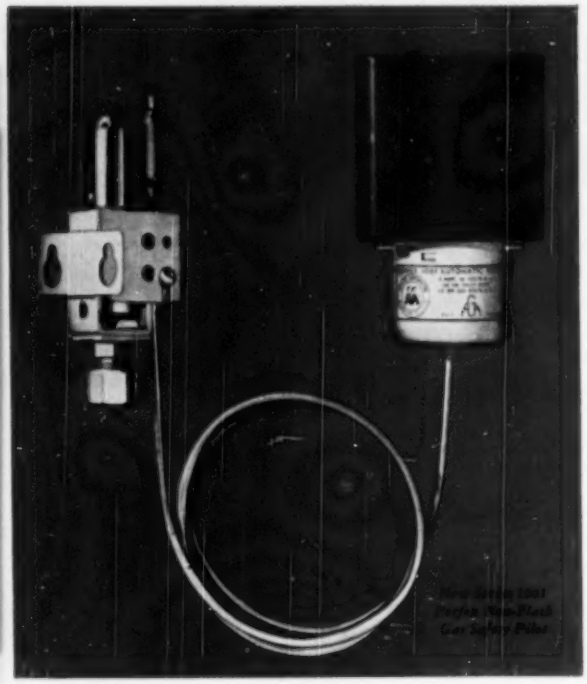
(Please Print)

Name.....

Address.....City.....

NOW! Perfex Non-Flash GAS SAFETY PILOT

Better Performance . . . added sales features with advanced design



- **NON-FLASH DESIGN**
  ...Gas cannot burn at orifice.
- **NON-PLUG PRIMARY AIR PORT**
  ...Large-opening—air passes through at low velocity and does not draw dirt into pilot.
- **CLEAN BLUE FLAME**
  ...Under all field conditions—no carbon deposit on bulb—insures uniform operation.
- **FOR MANUFACTURED—MIXED—OR NATURAL GAS**
  ...Needs only orifice change...no air adjustment required.
- **LOW GAS CONSUMPTION**
  ...Uses less gas than ordinary pilots.
- **EASY TO REPLACE ORIFICE**
  ...Orifice held in place with simple clip—can't freeze in place.
- **AUTOMATIC RECYCLING TYPE**
  ...If pilot flame goes out, merely relight it... no manual reset required.

Give your customers the benefits of this improved pilot...Your customers will be better satisfied... Your selling will be easier...You'll have fewer service calls...It's good business for *you*.

INTERCHANGEABLE WITH COMPETITIVE PILOTS

Dealers Who Know the Best Ask For

PERFEX
TWIN CONTACT CONTROLS

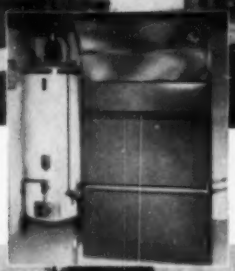
PERFEX CORPORATION, MILWAUKEE, WISCONSIN • *In Canada, Perfex Controls Ltd., Toronto 1, Canada*

AUTOMATIC TEMPERATURE CONTROLS • INDUSTRIAL ENGINE RADIATORS • PROCESS COLOR PRINTS

Capitalize on the tremendous sales appeal of

RADIANT *heating*

AT ITS PRACTICAL BEST!



Attractive home from plans of George H. Burrows Associates and built by Maynard R. Sheldon for J. E. Carson, Belvoir Blvd., Cleveland, Ohio, utilizes ceilings for warm air radiant heating. Janitrol gas unit is located in hallway closet on first floor. Installation by Home and Industrial Heating Co., Cleveland.

WARM AIR RADIANT PANEL

The system of using warm air for radiant heating offers many advantages . . . it's simple . . . it's practical . . . Janitrol can point to hundreds of installations of proven performance and home owner satisfaction. Floors or ceilings can be used for radiating surfaces, depending on the type of house to be heated.

Janitrol warm air radiant panel installations are not expensive, they are practically engineered for homes in $10,000 bracket as well as for more expensive custom built homes. Write for complete data.

This ranch style home of Mr. Dale Hanshew, North 9th St., Noblesville, Ind., features a Janitrol W.A.S. Hot Water System providing hot water for all household requirements as well as circulated hot water for the radiant panel heating. Builder, Perry Pitts, Sheridan; Janitrol installation by H. C. Gammon Co., Inc., Indianapolis, Ind.

HOT WATER RADIANT PANEL

In small basementless houses up to luxurious 14 room country homes, Janitrol W. A. S. Hot Water Systems are proving their many advantages as the heat generating unit for both floor and ceiling radiant panel heating. These Janitrols also provide in a single compact unit, an abundance of hot water for all domestic uses. You can feature Janitrol's proven performance for hot water radiant heating either as oil or gas (including L.P.) fired equipment. Write today for complete specifications.

Janitrol

Write As a dealer you should have a complete file on Janitrol equipment for radiant heating. Write for your manuals today.

A PRODUCT OF SURFACE COMBUSTION CORPORATION, TOLEDO, OHIO

New Homes mean New Profits!

when you use

HUSSEY COPPER

Buyers of new homes can't afford less than permanence in roofing and drainage products. They know that copper means quality, so recommend the lifetime of protection and trouble-free service of Hussey Copper. Specifying Hussey Copper for roofing and drainage products is good business for you—through increased initial profit . . . freedom from complaints and service calls . . . profitable repeat business.

HUSSEY

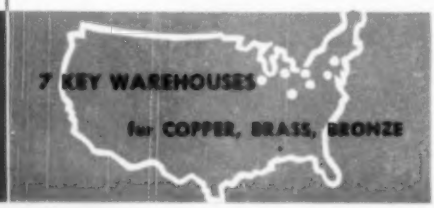
ROOFING & DRAINAGE PRODUCTS

Copper Sheets . . . Rolls . . .
Flashing . . .
Roofing . . . Conductor Pipe . . .
Eave Troughs . . .
. . . Ridge Rolls . . . Fittings . . .
Nails . . .
Brackets and Accessories

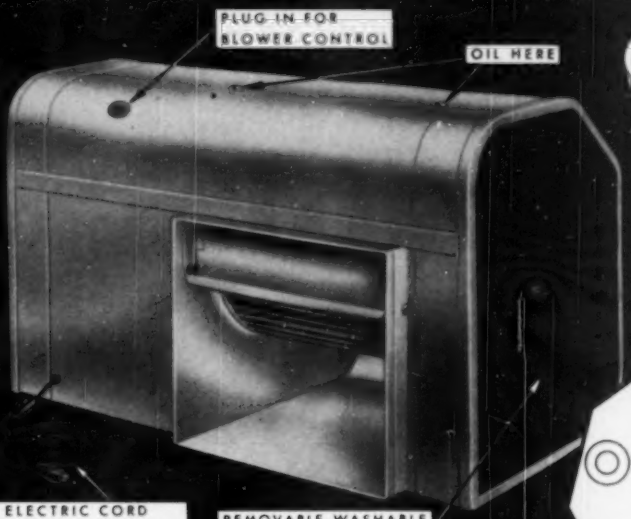
Our 102nd Year
1848-1950

C. O. HUSSEY & COMPANY
(Division of Copper Range Co.)
MANUFACTURING PLANT AND GENERAL OFFICES: PITTSBURGH, PA.
Hussey Warehouses carry stocks of Copper and Brass products for immediate shipment

7 convenient warehouses to serve you promptly!
CLEVELAND, 3415 Euclid Avenue • CLEVELAND, 3415 St. Clair Avenue • NEW YORK, 140 Sixth Avenue • CHICAGO, 2000 N. Damen Avenue • DETROIT, 1000 Fullerton Boulevard • PHILADELPHIA, Hussey Building, 1 Penn Square, Broad and Chestnut Streets



Cut yourself a *BIG* hunk



with the *NEW*

REX PRODUCTS

Prize Package

AIR-PAK

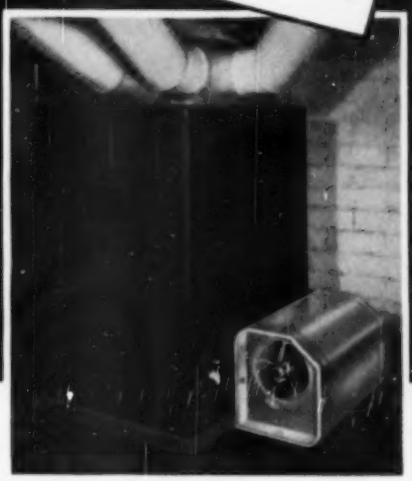
ONLY **$67.50** LIST

JUST PLUG IT IN . . . THAT'S ALL

This Rex Air-Pak is the newest development for bigger profits in 1950. Heating dealers talked us into making it. Secret field tests were made for two years. Now we're ready to turn it over to you. Your customers will "eat it up".

Here's why:—

- ★ It's portable.
- ★ Lowest priced packaged blower.
- ★ Midget in size with giant performance. Handles furnace jobs up to 24". Weighs only 58 lbs. Has ¼ H. P. motor and delivers up to 1500 C. F. M.
- ★ Used for both Summer-Winter operation.
- ★ Installed in a jiffy without chilling off the house.
- ★ Completely enclosed—no grouting necessary.
- ★ No cold air returns required.



FOR ALL THE FACTS AND FOR BIGGER PROFITS FILL IN THE COUPON

Air CONTROLS INC

Div. of THE CLEVELAND HEATER CO.

2310 Superior Avenue — Cleveland 14, Ohio

AIR CONTROLS, INC.
2310 Superior Ave., Cleveland 14, Ohio

☐ We're interested, tell us more.
☐ Send literature, P. D. Q.

Name _____

Address _____

City _____ State _____

NEED

REPAIR PARTS*

IN A HURRY?

*Try

NORTHWESTERN

All makes of Stove

Furnace and Boiler

Repair Parts

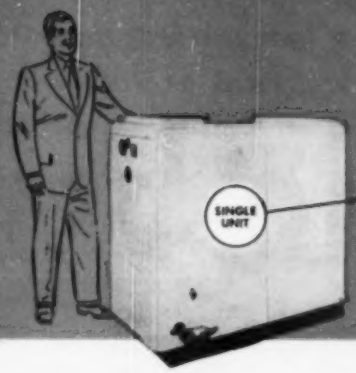
Northwestern

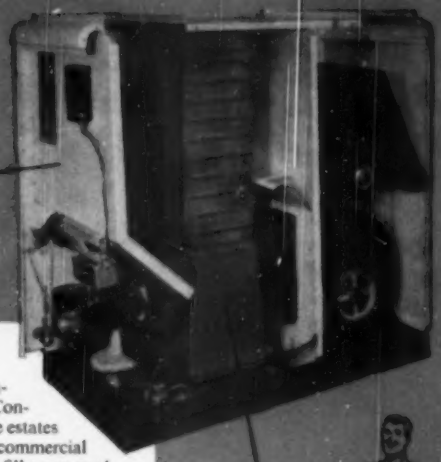
STOVE REPAIR CO.

662 West Roosevelt Road

Chicago 7, Illinois

Job sizes—no problem with the NEW RICHMOND TWIN UNITS!





With the addition of three new "twin-units," Richmond's complete line of cast-iron Gas Winter Air Conditioners is able to fill most any warm air job. Large estates or compact cottages—medium size homes or commercial installations—there is a unit in the Richmond line to fill your need.

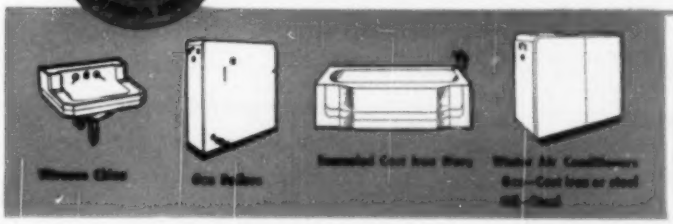
Check these capacities—they range from 66,000 to 280,000 BTU input. Models GHA 22-23-24 are paired up in a handsome "whiter-white" steel jacket with one set of controls—the GHA 1, 2, 3 and 4 are single units. All jackets are only 42" high—giving plenty of head and duct room. For jobs where floor space is at a premium, vertical units (same ratings as GHA 1, 2, 3 and 4) are available.

UNIT NO.	AGA RATINGS	
	INPUT BTU PER HR.	OUTPUT BTU PER HR.
GHA-1	66,000	52,800
GHA-2	90,000	72,000
GHA-3	115,000	92,000
GHA-4	140,000	112,000
GHA-22	180,000	144,000
GHA-23	230,000	184,000
GHA-24	280,000	224,000

A unit designed with the TRADE in mind!

RICHMOND

RICHMOND RADIATOR CO.—AFFILIATE OF REYNOLDS METALS CO.



See your wholesaler or **MAIL COUPON TODAY** AA-12

Richmond Radiator Company
19 East 47th Street, New York 17, N. Y.

Please send me complete information and illustrated folder on the new twin unit Richmond Gas Winter Air Conditioners. No obligations, of course.

Name.....

Company.....

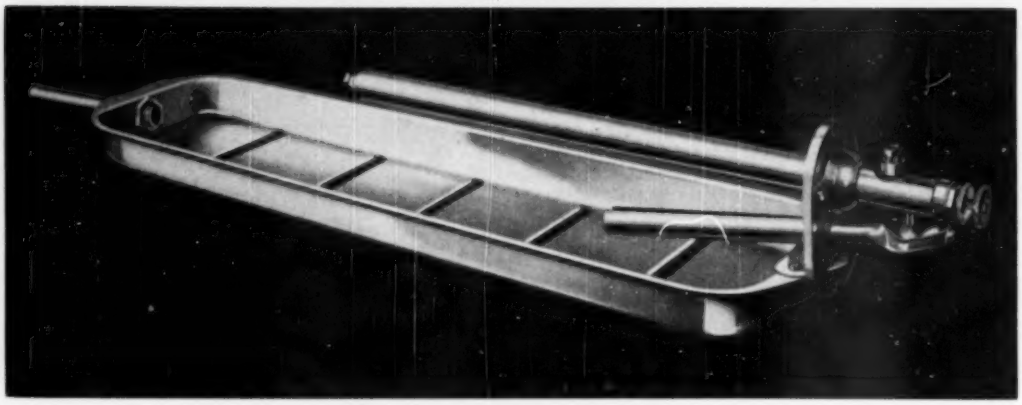
Address.....

New!

IMPROVED 1950 MODEL

- Drip Feed Principle Gives Almost Immediate Vaporization From Hot Pan Surface.
- Never a Stagnant Standing Pool of Water to Re-Heat Before Vaporization.

THERMO-DRIP



AUTOMATIC HUMIDIFIER

New, Improved... **More Efficient Than Ever Before. THERMO-DRIP HUMIDIFIERS simply outmode all others in design and performance.**

With Thermo-Drip, the water drips into stainless steel, fast heating pan only after pan heats. Each drop vaporizes almost immediately on touching pan surface. Only a thin film of water ever forms in pan. Water remains free of scum. There is no electrolytic action and the valve movement prevents any clogging by lime. Funnel prevents splashing or spraying. The new 1950 model has fewer parts—is easier to service with the improved fool-proof valve and thermostat. The new improved bi-metal thermostat is more sensitive—quicker acting. Airtight valve has positive seating action.

- Easy Fingertip Adjustment for Desired Degree of Humidity. Lock Nut Assures Hairline Regulation.
- Easy Installation for All Types of Warm Air Furnaces—Available in More Than One Dozen Different Vapor Pan Sizes.

Write today for complete FREE literature
Dept. A15

AUTOMATIC HUMIDIFIER COMPANY
CEDAR FALLS, IOWA

Our Sincere Thanks to the Trade for—

J.V.PATTEN COMPANY

Est. 1900-Incorporated 1928

AUTOMATIC FURNACES

22 SIZES & TYPES

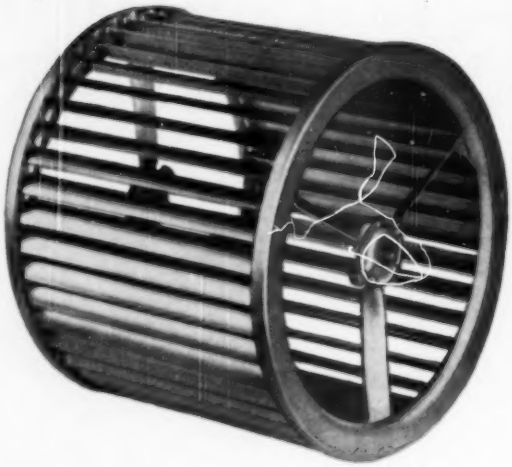
J. V. PATTEN COMPANY

Manufacturers — Engineers

SYCAMORE, ILL., U. S. A.

the Biggest Year in the History of Our Company.

Straight Talk to... Evaporative Cooling Management



MORRISON, with a background of outstanding service for a number of years to the evaporative cooling industry, now offers for your own manufacture . . .

COMPLETE KNOCKED DOWN BLOWER ENGINEERING SET UP... *Morrison Airstream Blower Wheels, Housing Sides, Bearings, Drives and Engineering Drawings*

From Morrison you have one source for all purchased material. Available to you, also, are test results of blower air delivery . . . ratings according to actual air delivery through your own evaporative coolers.

MORRISON MORRISON *Airstream* **BLOWER WHEELS**

★ *Send Today for Latest Morrison Catalogue*

MORRISON PRODUCTS, INC. 16816 WATERLOO ROAD CLEVELAND 10, OHIO

PENN LEADS AGAIN

to give you efficient service LOCALLY!

Fast, efficient, economical service on all PENN Automatic Controls is now available to you *at the local level* from PENN Authorized Service Stations. Factory-trained personnel experienced in the design, construction and operation of PENN Controls guarantee unexcelled service on replacements, repairs or simple adjustments. No delays . . . no headaches . . . just call the Station in your locality as shown in the list below. **Penn Electric Switch Co., Goshen, Ind.** Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ont.

AUTHORIZED PENN CONTROLS SERVICE

MAKE A NOTE OF THE PENN SERVICE STATION NEAR YOU

CALIFORNIA
LOS ANGELES
Utility Thermostat Co.

COLORADO
DENVER
Harvey M. Olmstead Co.

CONNECTICUT
BRIDGEPORT
Sid Harvey, Inc.
HARTFORD
Bell Pump Service Co.
NEW HAVEN
Bell Pump Service Co.

DIST. OF COLUMBIA
WASHINGTON, . . . C.
R. E. Michel Company
Sid Harvey, Inc.

ILLINOIS
CHICAGO
Robert Barclay, Inc.
Braun Bros. Heating Supply
PEORIA
Connor Company

INDIANA
GARY
G. W. Berkheimer Co., Inc.
GOSHEN
Penn Electric Switch Co.

IOWA
CEDAR RAPIDS
Electric Motors Co.
DAVENPORT
Industrial Engineering Equip. Co.
DES MOINES
Penn Switch Repair Co.
MASON CITY
Zack Bros. Electric Co.
SIOUX CITY
A. Y. McDonald Mfg. Co.

KENTUCKY
LOUISVILLE
Krauth-Campbell Electric Co.

MARYLAND
BALTIMORE
R. E. Michel Company
Roche and Hull, Inc.
Sid Harvey, Inc.

MASSACHUSETTS
BOSTON
Sid Harvey, Inc.
BROOKLINE
Webster Supply Co.
CAMBRIDGE
Cronin Supply Co.
FRAMINGHAM
Oil Heating Supply Co.
MALDEN
E. L. Kimball Co.
PITTSFIELD
Pittsfield Mill & Plumbing Supply Co.
SPRINGFIELD
Bell Pump Service Co.

MICHIGAN
DETROIT
Wright Automatic Company
FLINT
Moore Bros.

MINNESOTA
MINNEAPOLIS
Empire Clock Co., Inc.
SAINT PAUL
Empire Clock Co., Inc.

MISSOURI
KANSAS CITY
Chas. D. Jones Company
ST. LOUIS
Crescent Parts & Equip. Co.

NEBRASKA
LINCOLN
Paramount Supply Co.
OMAHA
A. Y. McDonald Mfg. Co.

NEW HAMPSHIRE
LACONIA
Palmer Plumbing Supply Co.

NEW JERSEY
CAMDEN
Joseph Sbar
ELIZABETH
Certified Fuel Unit Service
HACKENSACK
Bluco Oil Burner Supply Co.
JERSEY CITY
Control Specialty Co.
NEWARK
Certified Fuel Unit Service
NEW BRUNSWICK
Sid Harvey, Inc.
PARK RIDGE
Bluco Oil Burner Supply Co.
UNION CITY
Sid Harvey, Inc.

NEW YORK
ALBANY
Albany Burner Control Service
BRONX
B & D Electric Co.
BROOKLYN
The J. Hoe Co.
CORONA
Heating Control Repair Service
JAMAICA
Sid Harvey, Inc.
NEW ROCHELLE
Sid Harvey, Inc.
NORTH SYRACUSE
Buffalo Pump Service Co.
OZONE PARK
Atlantic Burner Supply Co., Inc.
STATEN ISLAND
Automatic Control Service Co.
ROCHESTER
Rochester Fuel Pump Service
Rochester Oil Burner Pump & Control Service
VALLEY STREAM
Sid Harvey, Inc.

NORTH CAROLINA
CHARLOTTE
Timmons & Son Automatic Controls

OHIO
AKRON
Valv-Trol Co.
CINCINNATI
F. E. Winstel Company
CLEVELAND
George Baumgardner
Ohio Pump Service Company
COLUMBUS
Columbus Electrical Works
DAYTON
M & R Electric Motor Service
TOLEDO
Fred W. Kiemle Co.

OREGON
PORTLAND
Pacific Coast Heating & Appliance

PENNSYLVANIA
PHILADELPHIA
Certified Fuel Unit Service
Sid Harvey, Inc.

RHODE ISLAND
PROVIDENCE
R. I. Fuel Pump Service Co.

UTAH
SALT LAKE CITY
Time & Instrument Co.

VERMONT
BURLINGTON
S. R. Carter Supply, Inc.

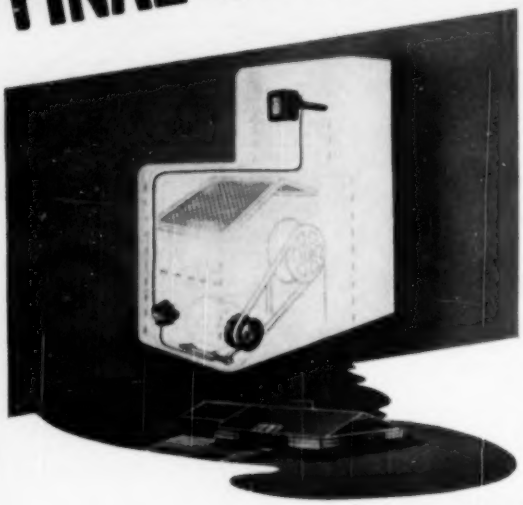
VIRGINIA
RICHMOND
R. E. Michel Company
Refrigeration Supply Company

WASHINGTON
SEATTLE
Pacific Coast Htg. & Appliance Co.
Seattle Pump Service Co., Inc.
SPOKANE
Pacific Coast Htg. & Appliance Co.

WISCONSIN
MILWAUKEE
Badger Controls Co.
FOND DU LAC
M. B. Guenther Co.

PENN AUTOMATIC CONTROLS

The FINAL TOUCH---*for Perfect Warm Air Heating*



MORE SALES MORE SATISFIED CUSTOMERS

At a cost within the reach of the average home owner you can now offer a control that will end drafts—hot and cold "layers" of air—"cold 70". On new installations or jobs already installed, it makes a more satisfied user of forced air heating.

Cool air being gently expelled from ducts.

Now the warmer air starts coming.

The rooms need heat! Blower at full speed.

Thermostat satisfied—blower starts slowing down.

Everything comfortable—just a warm zephyr to keep it that way.

MASTER BLOWERTROL

. . . is a complete furnace control with dependable Underwriters approved fan and limit switch.

. It first starts the blower motor at a plenum temperature of 100 degrees and then gradually increases blower speed as temperature rises to 130 degrees. When plenum temperature drops below 130 degrees, it gradually reduces the blower speed and shuts off the motor completely at 90 degrees.

Equipped with manual switch for full speed summer operation.

NOT JUST A RUSH OF HEAT—

It's comfort Flowing In

TYPE A12 THERMOSTAT

This thermostat is designed for two-wire operation and is regularly furnished in an ivory colored plastic case. It has a sensitive bimetal blade, magnetic snap-action and shield to protect the contacts from dust.

TYPE B12 DAMPER CONTROL MOTOR

This is a powerful, silent and dependable control motor. It is used and recommended for furnace regulator sets, duct damper, shutter and valve operation. It automatically returns with full load to "normal" or "off" position upon current failure. There are no external springs to install or adjust.

Write for full information

THE WHITE MANUFACTURING CO.
2368 University Ave. Saint Paul, Minnesota

A famous name in furnaces for nearly 50 years

KO-Z-AIRE

Presents

. . . A NEW CONCEPT IN WARM AIR HEATING IN ITS COMPLETELY NEW LINE FOR 1950

Here's the Big News from KO-Z-AIRE! A complete new line of gravity and forced air oil and gas fired units from 70,000 Btu input to 450,000 Btu input is now ready. New, handsome designs. A full range of sizes and prices to help you get more sales. New factory marketing policies assure faster, greater, more experienced assistance and service to dealers and distributors.

For more and faster sales . . . bigger profits . . . make it a nifty Fifty . . . line up with KO-Z-AIRE!

Oil-Fired Models			Gas-Fired Models	
90 OV	95 OG	80 LB	90 GV	95 GG
90 OLV	125 OG	100 OB	90 GLV	125 GG
115 OV	75 OHB	150 OB	115 GV	75 GHB
115 OLV	95 OHB	220 OB	115 GLV	95 GHB
70 OG	80 HB	350 OB	70 GG	150 GF

AMERICAN GAS ASSOCIATION — MEMBER — NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION — INDOOR COMFORT — UL

DISTRIBUTORS . . . DEALERS . . .

Some choice territories still open . . .
. . . mail the coupon today!

FACTORY • GENERAL OFFICES • SALES OFFICES

KO-Z-AIRE, Inc., Dept. AA-1
Red Oak, Iowa

OKAY! I want to make it a "Nifty Fifty." Send the information about your 1950 line and your new sales plan.

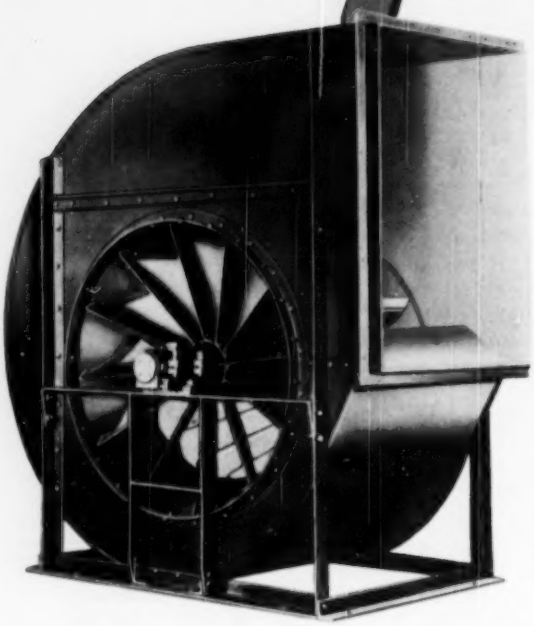
Name _____

Address _____

City _____ State _____

We are ☐ Jobbers ☐ Dealers

4 ways "BUFFALO" LIMIT-LOAD FANS MAKE YOUR JOB EASIER AND BETTER



1. EASIER TO INSTALL

"Buffalo" LL Fans can be delivered in the exact arrangement, drive and discharge position needed for the particular installation. The custom-built nature of "Buffalo" LL Fans gives you the *capacity* you want in the *space* in which you have to work.

2. NON-OVERLOADING

Regardless of the duct length and size (and static pressure) required for the job, you DON'T have to worry about overloading an LL, and burning out the motor. AN LL CAN'T BE OVERLOADED, due to the Limit-Load characteristic. Thus, you can pick your motor size close to rated capacity for greatest horsepower economy.

3. RELIABLE PERFORMANCE

You have your "cfm's made to order" when you pick from the very wide range of sizes offered in the LL line (from 600 to 500,000 cfm)—and you can be sure that your LL will deliver as rated—quietly and for many long years. "Buffalo" has been "First for Fans" for 72 years.

4. NO SERVICING WORRIES

Each "Buffalo" Fan is built ruggedly for the intended job. Housings, rotors, shafts, bearings and support bracing are rigid and sturdy. All fan parts are accessible for quick inspection, and lubrication is thorough, simple and positive.

Your Free Copy!

BULLETIN 3675 describes all sizes and construction features of "Buffalo" Limit-Load Fans—many other useful engineering facts for you. WRITE FOR IT NOW!

Don't Be Without This Manual!

FAN ENGINEERING, 5th Edition, gives you 808 pages of latest facts on fans, air flow, sound laws, heat, cooling, drying, air properties, humidity, air conditioning! ORDER YOUR COPY NOW! Price $6.00. Postpaid in U.S.A.

BUFFALO FORGE COMPANY

504 BROADWAY BUFFALO, N.Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

Branch Offices in All Principal Cities

AMERICAN-Standard

First in heating . . . first in plumbing

The SENECA and the WYANDOTTE

(FOR BASEMENTS) (. . . AND FIRST FLOORS, TOO)

. . . *Low-cost, efficient winter air conditioning for smaller homes*

Here are two fully automatic gas fired Sunbeam Winter Air Conditioners that you can sell for small to average-sized homes . . . that will assure pleased, satisfied customers . . . and that will be among the most profitable items on your sales floor.

The **SENECA**—for basement installation—has an attractive Forge Red jacket that conceals all controls. The heating element is corrosion-resistant copper bearing steel, correctly proportioned and joined permanently by electric welding. Baffles in large radiator conduct gases through multiple passes, heating radiator completely before gases enter flue. Burns manufactured, natural, mixed, liquefied petroleum or butane-air gas efficiently and economically—and is available in four sizes with an input per hour of from 85,000 to 150,000 Btu.

The **WYANDOTTE**—incorporating the same fine engineering construction as the Seneca—supplies efficient, low-cost, air-conditioned heat and is designed for top performance in first floor installations as well as basements. Its compact size, about 5 feet high by 2 feet wide—makes it satisfactory to install in utility rooms, kitchens or even closets. Factory-assembled and pre-wired for easy installation. In four sizes, from 55,000 to 105,000 Btu input per hour.

For complete information about the Seneca, the Wyandotte and other Sunbeam Winter Air Conditioners and Warm Air Furnaces in the American-Standard line, contact your Wholesale Distributor. **American Radiator & Standard Sanitary Corporation,** P. O. Box 1226, Pittsburgh 30, Pa.

LOOK FOR THIS MARK OF MERIT

Serving home and industry

AMERICAN STANDARD · AMERICAN BLOWER · CHURCH SEATS · DETROIT LUBRICATOR · KEWANEE BOILERS · ROSS HEATER · TONAWANDA IRON

Heating Contractors!

INCREASE PROFITS THIS WINTER

ROCHESTER CAC* THERMOMETER
Circulation Air Control

Service unbalanced heating systems . . .

Now, for the first time, unbalanced heating systems can bring you profits never before realized. Your trade organization, *THE NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION,* strongly emphasizes the benefits to be gained by you and your customers from proper temperature balancing —to your customers it means wintertime heating comfort at minimum cost; to you, profit, prestige.

Thousands of forced air heating systems will require temperature adjustments this winter that *you* can make quickly, easily, and accurately. THE ROCHESTER CAC (circulation air control) THERMOMETER KIT is your means of increasing profits. It includes three accurately calibrated thermometers that enable you to check and regulate the temperature at (1) the warm air duct, (2) return air duct, (3) the blower switch, (4) the burner limit switch, all at one time. Each thermometer has a tapered bushing on the stem that makes them self-supporting—leaving your hands free to perform adjustment operations. The big 2" dial makes it easy to read, easy to handle. The thermometers are sturdily made of stainless steel that will last a lifetime. Complete instructions supplied with each kit.

Buy a Rochester CAC Thermometer Kit now. Write in for literature and prices. Don't wait! *Make those extra profits this winter.*

ROCHESTER MANUFACTURING CO., INC.
66 ROCKWOOD STREET, ROCHESTER 10, N. Y.

Please send literature and prices on the Rochester Circulation Air Control Kit No. 0502

Name .....

Company .....

Address .....

City ..... Zone ..... State .....

Rochester
GUARANTEED ACCURACY

REPAIR PARTS

FOR ALL

FURNACES, BOILERS

AND

OTHER HEATING UNITS

BRAUER REPAIR PARTS
STOVE FURNACE BOILER OIL STOVE RANGE

WE SPECIALIZE IN GENUINE REPAIRS

THE COMPLETE HEATING SUPPLY HOUSE

OFFERING ALL APPROVED BRANDS OF

ATTIC FANS
BOILER CEMENTS
BLOWERS
CLEANERS
CONTROLS
CONVERSION BURNERS
DAMPERS
DRAFT CONTROLS
FANS
FILTERS
FURNACE CEMENT
FURNACE PIPE
FURNACES, ALL FUELS
GAS BURNERS
HUMIDIFIERS
METAL SCREWS
OIL BURNERS
SMOKE PIPE
REGISTERS
ROOF COATINGS
SMALL TOOLS
STOKERS
UNIT HEATERS
VENTILATORS
WATER COILS
WATER HEATERS
WATER SOFTENERS

BRAUER INSULATING PRODUCTS

OUR INSULATION DIVISION
can supply insulation for all needs

ASBESTOS		Insulation for	
Millboard	Tape	Ducts	Refrigerators
Paper	Cements	Buildings	Boilers
Pipe Covering	Boiler Covering	Roofs	Pipes

Featuring such well known brands as

NON-CON-DUX ASBESTOS PRODUCTS
"FIBERGLAS" "KAYLO" & "ULTRALITE"

A. G. BRAUER SUPPLY CO.

2100 WASHINGTON AVE. ST. LOUIS 3, MO.

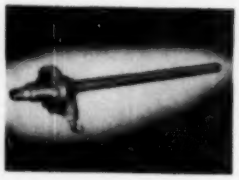
NO OTHER

Oil-Fired Equipment Can Match Electrol

Complete Line: Oil Burners • Air Conditioners Water Heaters • Boilers

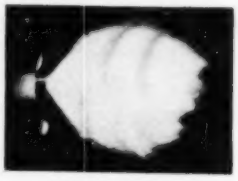
Nobody Else Has These Exclusive Sales Features!

Entirely Different Burner!



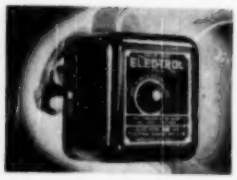
Cut-Off Valve

No other burner has this quick shut-off valve at nozzle. No oil drooling. No fouled nozzles.
No after drip. No costly magnetic valves needed.
Less service.



Ball Flame

No other burner has this suspended intense flame. Rotating fire never touches wall of chamber.
Burns 100% "cat-cracked" oil without adjustment.
Cleaner Boilers. Less service.



Master Control

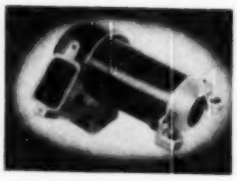
No other burner has a control operating on clean air instead of corrosive flue gases. Burner mounted, wired and tested at factory.
No relays. No transformers.
Less service.

Thermo-Loop

No other burner has this pure nickel heat exchanger.
Operates safety control on pure air.
Located right in combustion chamber.
Constant performance regardless of flue gas temperature.
Less service.

Dealers! You'll Find Electrol Easier to Sell! . . . Exclusive Agencies Available! WRITE TODAY!

ELECTROL
BURNER MANUFACTURING CO., INC.
Rutherford New Jersey
BALL FLAME



Spiralon

No other burner uses a large expensive casting to deliver air to combustion head. Because of this, no other burner has Electrol's intense flame.
Highest alloy flame director.
Prevents burnt air tubes. Less service.

News Round-Up

Small Homes Council Course

BASEMENTLESS HOUSES will be one of the major topics at the fifth annual University of Illinois Small Homes Council short course in residential construction for builders and contractors. The two-day course will be held on the campus Jan. 25 and 26, 1950, it was announced by James T. Lendrum, acting director of the council, which sponsors the short course in cooperation with the Division of University Extension.

Research work in construction methods and residential planning, which has been conducted by the Small Homes Council during the past 12 months will be presented by members of the council's staff.

Advance registration for the course may be made through R. K. Newton, Division of University Extension, 205 Arcade building, Champaign, Illinois. The registration fee for the two-day course is $5.

Steel Prices Up

BENJAMIN F. FAIRLESS, president of United States Steel Corporation, recently issued the following statement:

"The several steel producing subsidiaries of United States Steel corporation have announced new mill prices for numerous steel products of their manufacture, as well as adjustments in their lists of extras and deductions. These price revisions reflect actual and approaching changes in the cost of production of these products, including the substantial higher costs to result when the new insurance and pension programs become effective. They have been made pursuant to the long-established policy of the United States Steel to sell its steel products at the lowest possible prices consistent with cost.

"In April of this year, we stated that a careful study of extras and deductions covering certain products of our manufacture was being made in an effort to establish more accurate pricing in relation to the cost of performing the service covered by the extra or deduction. Such study now has been completed. The conclusions are reflected in the announced adjustments of extra charges and deductions, which will result in higher charges for certain gauges, sizes and specifications on certain steel products; lower charges on other products; and some prices will remain unchanged.

"The overall effect of these new mill prices is an average increase of about 10 cents per hundred pounds in our announced mill prices. An average further price increase of about 10 cents per hundred pounds will result from such adjustments in extras and deductions. Together this produces an average increase of approximately four per cent in the present average selling price of our subsidiaries' steel products.

"All of our steel products, however, will not increase in price as a result of these revisions. Beginning on Jan. 1, 1950, the price of our tin mill products, which are sold by contract on an annual basis, will be reduced about 15 cents per base box, or about $3.30 per ton. Furthermore, the revisions do not change the present mill prices or extras for stainless steel products."

By merely turning several controls this electrolytic plating foreman will be sure his tin plate will have exactly the coating weight specified in his order. This type of plating thickness meter is being installed in all Carnegie-Illinois tin plating plants.

Home Builders Show

THE 6TH ANNUAL CONVENTION and Exposition of the National Association of Home Builders in Chicago, February 19-23, will be devoted largely to the practical problems of home builders.

"The most notable feature of the show, and it will be the most diversified we have ever attempted, is the fact that it will be of immediate and practical value to every builder who attends," said executive vice president Frank W. Cortright of Washington.

According to Mr. Cortright, the entire program is planned to acquaint builders with the new products, new building techniques, new equipment applications and progressive business methods.

Convention-Committee chairman E. M. Spiegel of Passaic, N. J., reports that the program is divided into

News Round-Up

two sections. The first consists of major addresses, discussion panels, audience participation and inspirational features. The second consists of nine special clinics on selected builders' problems.

One entire session has been reserved for an on-the-spot demonstration of outstanding new building equipment and methods. W. Hamilton Crawford of Baton Rouge, La., a member of the convention committee, and Carl G. Lans, NAHB's technical service director, are supervising the demonstration which is expected to attract a capacity audience.

A comprehensive discussion of mortgage finance will bring together a panel composed of National Housing Administrator Raymond M. Foley, FHA Commissioner Franklin Richards, T. B. King, Chief Loan Guaranty Officer of the Veterans Administration, officials of various private lending institutions, veterans' representatives and home builders. Thomas P. Coogan, NAHB first vice president from Miami, will be moderator.

Among the many clinic discussions, will be a question and answer session dealing with FHA, VA and FNMA problems. A heating clinic led by Carl Boester, research expert of Purdue University, will bring out the advantages of warm air vs. hot water systems, direct and indirect heating by convection, radiation and radiant heating. Clinics will also be held on the construction and management of rental housing and the impact of socialized public housing on the community level. Another group of clinics will concentrate on specialized problems encountered in the everyday business of home building.

Indoor Comfort Conferences Added

ANNOUNCEMENT HAS BEEN MADE by the National Warm Air Heating and Air Conditioning Association that 10 *Indoor Comfort* Conferences have been added to those already announced.

Guy Voorhees at a recent conference.

Designed to meet the requests of previous conference students, the 1950 schools will feature instruction covering the recent trend for low-cost house heating and heating with warm air larger non-residential structures. Of two-day duration instead of three, these conferences will be of a special nature so that those who attend can immediately increase their business activities to include these newer applications.

Guy A. Voorhees, application engineering director of the association, will continue to instruct the new conferences. A complete listing of the conferences will be found in the ASSOCIATION ACTIVITIES section of this issue.

SMA Board Meets

THE BOARD OF DIRECTORS of the Stoker Manufacturers Association met in the office of the association on November 22nd. This was the first meeting of the directors since the annual convention held at French Lick, Indiana last June, and was attended by all directors except one.

The major action taken concerned future meetings of the association's membership. The directors decided to call a winter membership conference, similar to the meeting held last January in Chicago, to be held also in Chicago some time about the middle of February. Tentatively the date is set for February 16, 1950, at the La Salle Hotel.

This meeting will be in the nature of an open forum and round-table conference for manufacturer members, to start early in the afternoon with a dinner meeting in the evening to which will be invited SMA's associate members and guests representing allied industries and the press. The morning will be taken up with meetings for the directors and engineering committee. As plans and program for this meeting are developed and completed the membership will be notified.

The directors also decided to set the place and time for the 1950 annual meeting. Chicago was also selected as the meeting place with the dates tentatively set for early in June. Negotiations are now being conducted with the Edgewater Beach Hotel to see if suitable dates and accommodations can be secured for this meeting. No definite plans for this meeting have been determined, but it is expected that details will be ready for announcement at the winter membership conference on February 16th.

Other action taken by the Board of Directors on November 22nd, included the appointment of T. A. Crawford, general manager, Timken Silent Automatic Division, Timken-Detroit Axle Company, Detroit, Michigan, as a director to succeed Walter Sormane, resigned.

This is no joke, Son!

This is today's quickest moving easy-to-handle profit maker

The VAN-PACKER *Packaged Chimney*

THE LIFETIME, LIGHTWEIGHT CHIMNEY

Underwriters approved. Meets FHA requirements.

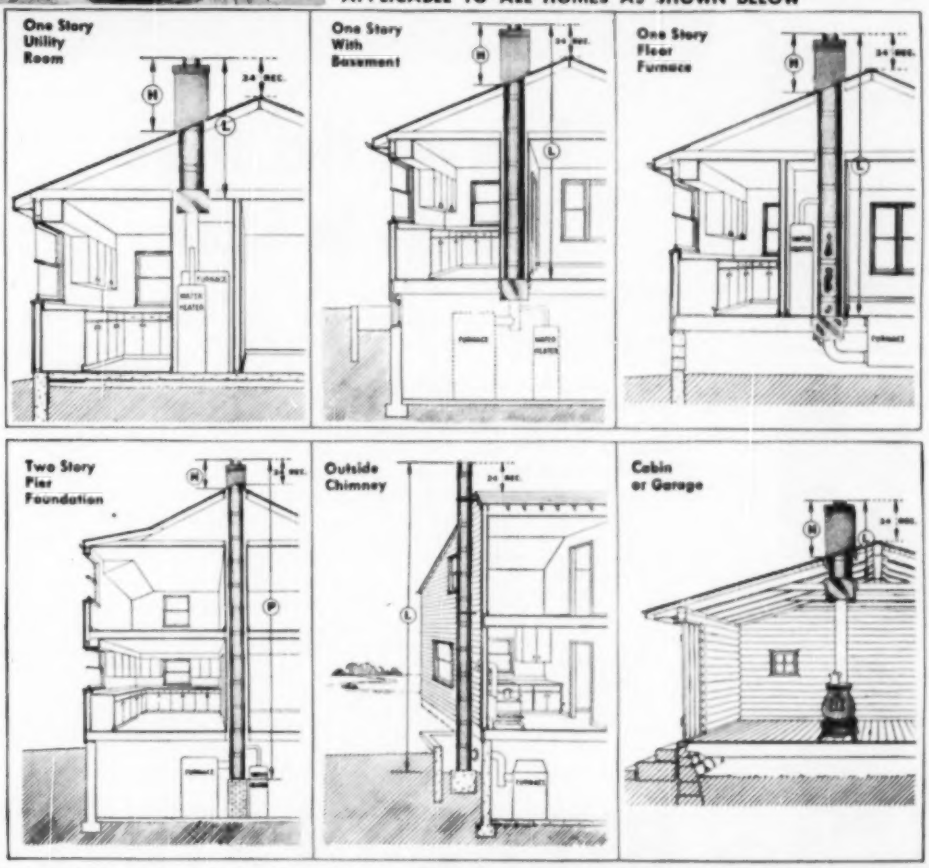
EASY to make profits...costs 20% to 40% less than brick.

EASY to install . . . lightweight, needs no foundation, suspends from ceiling or floor joists.

EASY to handle . . . prebuilt, completely packaged, installed in 4 hours or less.

EASY to advertise and to sell . . . free newspaper mats furnished . . . nationally advertised to pre-sell for you.

APPLICABLE TO ALL HOMES AS SHOWN BELOW



See your jobber or send chimney dimensions for prices and dealer discount.

VAN-PACKER CORPORATION
124 West Adams Street, Chicago 3, Illinois

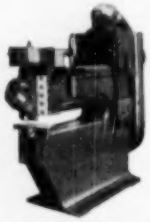
Machinery and Tools for Metal Fabrication

Your nearby Ryerson plant is a dependable source for every type of sheet metal shop equipment. All are guaranteed to give satisfaction. Let us help with your metal working problems. Prompt, personal service assured.

8-1 Beverly shear, 14 ga. capacity.

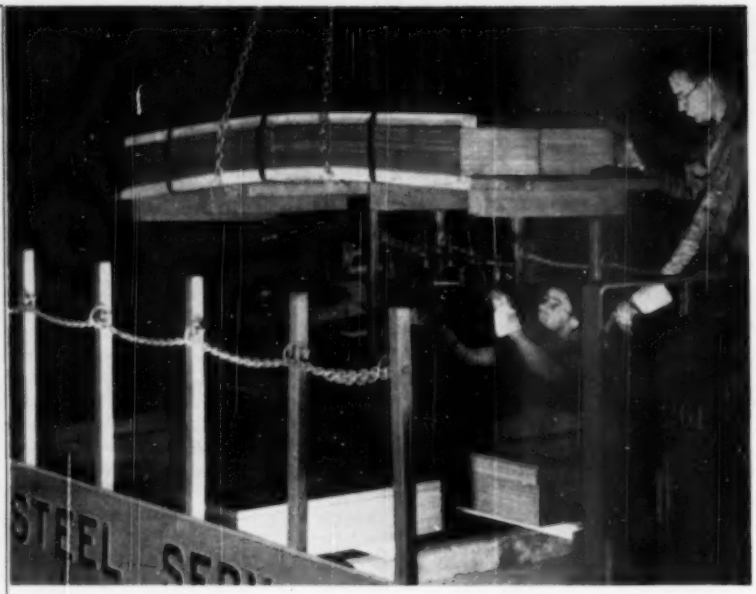
Standard bending brake—also Universal.

18 ga. Pittsburgh Lockformer.



Rotary shear for irregular and circle cutting, also flanging.

Combination shear, punch and coper. And every other type of metal working equipment.



Ryerson Has More Sheets in Stock

Strike-depleted Ryerson sheet stocks are rapidly rebuilding with some types already back in good supply.

Hot and cold rolled carbon steel sheets, for example, are available in a wider gauge and size range than in recent weeks. And large stocks of stainless sheets and expanded metal await your call. With bar-size angle stocks also improving, only galvanized sheets remain in short supply, of all the products regularly used by sheet metal shops. And even these stocks are somewhat improved.

When you order from Ryerson you get time-tested Allegheny stainless, Ryex expanded metal with all sharp edges positively removed for easy handling—you get Ryerson certified quality that helps you reduce shop costs.

So we urge you to call us for any steel requirement. Prompt, personal service is assured.

RYERSON CERTIFIED STEELS

PRINCIPAL PRODUCTS

SHEETS—hot & cold rolled, many types & coatings
BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—sheared & U. M. Inland 4-Way Safety Plate
STAINLESS—Allegheny sheets, plates, bars, angles, tubes, etc.
TUBING—seamless & welded, mechanical & boiler tubes
EXPANDED METAL—Ryex standard & flattened mesh
MACHINERY & TOOLS—for metal fabrication

RYERSON STEEL

Joseph T. Ryerson & Son, Inc. Plants at: New York • Boston • Philadelphia • Detroit • Cincinnati Cleveland • Pittsburgh • Buffalo • Chicago • Milwaukee • St. Louis • Los Angeles • San Francisco

AMERICAN ARTISAN

A Year of Contrasts

A RETURN to more normal patterns of business operation marked the year just ended. The post-war honeymoon came to an abrupt end in many lines of manufacture and it became necessary for the seller to woo the buyer once again rather than to calmly accept his order, to be filled at leisure.

Almost every industry seemed to go through a shakedown which saw a slump and then a recovery to a volume still far above pre-war business. The steel industry seemed to be on its way to shattering peacetime annual production marks when a slump arrived in the middle of summer that saw a drastic decline in production. It was at a low point when the steel strike began but then instantly went into high gear when the strike ended.

The warm air heating industry went through a seasonal cycle that saw shipments of warm air furnaces range from 31,768 units in January 1949 to 111,500 units in September. Shipments of furnaces for the first three quarters of the year were down 10 per cent from shipments in a corresponding period in 1948. Galvanized steel sheets for the heating industry were more plentiful during 1949, but some ground was lost due to the steel strike. Supply has not yet balanced demand in this product vital to our industry.

Even people in the construction industry were surprised at the volume of housing starts during 1949. Despite predictions that 1949 volume would fall at least 10 per cent below 1948, housing starts kept at a high point throughout the year and when final figures are totaled 1949 will probably be the record construction year.

The fuel picture saw an upsurge throughout the year on the part of gas and a gradual recovery by oil. These changes were made at the expense of coal, which lost momentum month by month.

Construction

While the past year was marked by passage of a far reaching public housing bill, effects of this legislation were not yet felt by the construction industry. A record total of 93,000 houses were started in November and this put the totals for 11 months of 1949 at 937,100, surpassing the 937,000 units started in 1925, the former peak year. Final total for the year will probably pass 1 million units.

Outstanding characteristic of the construction year was the fact that the usual seasonal downturn did not begin in late summer. From July through November there were more houses started each month than had ever been recorded for corresponding months in the past. New records in dollar volume of buildings were also set last year. More than $19 billion worth of construction was put in place.

Furnaces

Shipments of warm air furnaces declined approximately 10 per cent during the first 9 months of 1949. A total of 540,863 units had been shipped in that period of 1948 and 483,536 furnaces were shipped in 1949. Public acceptance of automatic heat made considerable gains as indicated by total shipments of 328,450 gas and oil fired units from January to September compared to 261,061 units in 1948. A table giving furnace shipments month by month is on Page 102.

Steel

Last year the steel industry reached two extremes: it produced more than 8 million tons of steel each month during the first quarter and made only 917,000 tons during the month of October, a strike month. Despite production difficulties during the year the overall total was

1949 WARM AIR FURNACE SHIPMENTS

Month	Total Units	Air Circulation in per cent		Type of Fuel in per cent			Automatic Heat
		F W A	Gravity	Solid	Oil	Gas	%
January	31,768	53	47	41	31	28	59
February	33,126	51	49	47	26	27	53
March	41,376	48	52	46	24	30	54
April	34,608	55	45	36	29	35	64
May	42,427	60	40	29	29	42	71
June	55,330	63	37	26	30	44	74
July	48,552	64	36	29	31	40	71
August	84,149	65	35	26	31	43	74
September	111,500	61	39	29	27	44	71
Total (9 months)	483,536	58	42	34	29	37	66

77 million tons of raw steel, third largest for a peacetime year. Despite loss of production due to the steel strike, it is not expected that any serious shortages will continue to plague users of products of the steel industry.

In 1950 high costs may be a grave problem for iron and steel companies. Pensions and other benefits to be paid for by the companies will increase costs, although the impact will vary among individual companies.

Aluminum

Aluminum production went through a pattern very similar to that of steel. During the first quarter of 1949 demand for aluminum and its products was at a high level, but went into a midsummer decline. A recovery from this low point began in the early fall but was offset by strike of the CIO. In spite of limiting factors, it is estimated that production of primary aluminum was slightly in excess of 1,200,000,000 lb for the full year, compared to approximately 1,247,000,000 lb in 1948. Demand for aluminum for construction uses is expected to keep production at a similar level.

Gas

Entrance of natural gas into many new residential areas was the most significant development of this fuel during 1949. Natural gas pipelines totaled 251,330 miles in 1948 and the FPC authorized construction of 8,500 miles of new pipeline during 1949. Applications are pending for 14,600 miles more.

A survey made in May 1949 indicated the gas utility industry was supplying approximately 9.35 million house heating installations. Expectations are that 750,000 additional installations will be made before spring of this year.

A Look Ahead

Various economic sources have already compiled their forecasts of the business picture for 1950. General expectation seems to be that 1950 will be almost as good a year as 1949 but not equal to the levels set in 1948. A year ago we still had several important sectors in the economy with substantial backlogs of unfilled orders; automobiles, steel, and a few others. Because of production losses caused by strikes some backlog of demand will be carried over from last year but the day of acute shortages has passed.

A decline of perhaps 5 per cent is expected in construction this year with privately-financed residential building dropping and being offset by increases in rental construction and publicly-financed housing. With continuation of a high construction volume, the market for warm air heating equipment is expected to remain firm, but a more competitive market will demand a higher grade of salesmanship.

Activities of the government will have considerable bearing on the boldness with which business will expand its horizons this year. If taxes are increased venture capital may be almost impossible to find. Restriction of industry expansion would result in a static economy which could only decline.

Summing up the outlook for heating and sheet metal all factors indicate a continuation of a high volume of business. Construction is expected to decline but will continue at a rate which will require the production and installation of many hundreds of thousands of warm air furnaces. Surveys of buying preference of homeowners or prospective home builders have shown that warm air heating has not only held its position of dominance in the residential field but has increased its lead. Public demand for automatic heat has contributed heavily to this increasing preference.

Sell *Indoor Comfort* in 1950!

HUMAN TENSIONS
Unique Approach to Selling

J. ARCHER KISS
Sales and Management Consultant

A SALES TECHNIQUE which can mean increased volume with less effort for any salesman.

FOR a good many years we have looked upon selling as an aggressive act. The salesman found somebody to sell and put on the pressure. This technique was so universal that when customers outnumbered products the pressure was relieved and the seller's market took over.

Now that we must sell again, most of our sales personnel is so habituated to the seller's market that they face selling with complete confusion and, in many cases, with actual fear and uncertainty. Are we to go back again to the philosophy that selling means compelling someone with money to take our merchandise in exchange for his cash?

The trouble with pressure selling—and most of our selling is that, even if we don't think so—is that it is a continuous process of effort. If you pressure a sale

today, you must pressure another tomorrow even if you are dealing with the same customer. If you pressure enough sales, folks will call you successful no matter what your customers call you. It's not a secure position to be in, yet so much of our business today is exactly in that state, perched on the precipice ready to fall the moment we take our eyes off of it.

Cigarettes offer a good example. Millions have been spent selling cigarettes by pressure methods, high and low. With millions of people smoking wouldn't you think it possible to stop advertising for a while? They don't dare take the pressure off, for fear sales would drop. And they would. It's like balancing a ball on top of a fountain of water. Turn off the water and the ball drops to earth.

Another Kind of Selling

Then, if pressure selling is so insecure what other kind is there? The kind we did during the war and following years, when people *wanted* things and we supplied them. Even then, artificial hungers were developed, selling was being done constantly. We were never completely out of things. Folks learned to want, and when you find that they do not want, you create wants and that creates business. We cannot duplicate war time shortages but we can use the same basic methods.

Here's how: Instead of offering a product positively, discussing its merits, its qualities, etc. and then urging the customer to see and to buy—let's work on the customer instead of the product. If people always buy the best, who buys the poorest product? No, they do not buy the best, they buy the one which fits most perfectly into their lives, as they see it at the moment. Therefore, it is fitting the needs which makes bigger sales possible now that we have an abundance of merchandise and an over-abundance of claims by sellers.

And now we come to the basic principle of selling that will succeed today: It is a matter of building sales upon tensions—creating tensions, magnifying tensions, recalling tensions and in every way developing a situation that will produce *wants* for our product. If you're curious as to which comes first, the product or the want, I'll tell you it's the want. Then why make a product and go looking for someone to buy it?

The principle of utilizing tensions for selling is to study the customer—the prospect. What tension in his life will be relieved by your product. If you made umbrellas you would pray for rain every day or move to a rainy area. If you could make it rain you would be creating a tension which your product would help relieve.

A manufacturer of a cereal finds that folks are not hungry enough to consume his product in large quantities. Hungers come and go. He cannot create them. So he finds other tensions which his product may relieve. He discovers that most people worry over their health. Here is a ready-made tension. So he adds vitamins to his cereal and offers it as an aid to the existing tension. Now you can eat to become healthy as well as to satisfy your hunger.

If you want fresh outside air to enter your home you expel the stale air. That creates a vacuum and the outside air rushes in. You don't go outside and try to push the air in. Just so, when you have created a vacuum in the mind of the prospect and directed that vacuum toward your product, he'll buy to fill a need.

Fundamentally (and frankly) most sales are made by worrying the prospect with a problem he may never have thought of, and then offering him the solution. Selling aspirin to a man with a headache is not salesmanship. Of course, you cannot give him a headache so he'll buy, but you find other reasons which appeal to his normal personality. You worry him about what will happen if he has a headache late at night, so that he will buy an extra box. You worry him—you offer him a solution—he buys—the tension is relieved—you have made a sale. Nobody ever thought of vitamins until some manufacturer worried folks about the lack of them. You will not buy a television set just to own one. But let somebody say, "Why, man, you don't know what you're missing." Now you are worried. Now you can be sold.

The man who fires his furnace by hand is certainly working hard at it. He knows that, but it doesn't worry him until somebody reminds him that he could sprain his back, that his energy is being wasted, that such hard work will age him prematurely. Ah, now you have created a tension. Notice that the tension has nothing to do with your product, only with human moods. Now that you've created a tension the man will look carefully for proof of your claims. He'll complain that he really is exhausted. When he shaves he'll look for new wrinkles in his face. All his imaginary ills will intensify under his thinking. Now sell him an automatic heating system. Well, don't sell it—just tell him about it, you've already sold him.

A woman can live contentedly in a small home until her friends buy large ones. Suddenly she finds herself unhappy (under tension) and only a larger house will relieve her tension. You can walk along a street for blocks completely unaware of the heat until you see a thermometer or a headline. Coca-Cola advertisements do not make you thirsty—they only remind you that you are thirsty, give you a reward if you are willing to be thirsty (refresh yourself) and generally create a tension which you relieve by buying a Coke.

Danger Alerts You

Well, that's enough evidence of how tensions work, that they are at work, that they are used effectively. Just one more potent example. You're driving along a highway. Everywhere signs advise you to drive carefully. Somebody is trying to project his ideas into your mind, to sell you something. You refuse to buy. You drive along happily certain that you have no tensions, no care, so why buy the idea?

Suddenly you come upon an accident. You are horrified. And, of course, you are mentally uncomfortable. A tension has arisen! Now you'll buy the idea of safety and you drive along more slowly and more carefully only so long as the tension remains. As you pass farm houses, mountains and lakes the tension wears off and you pick up speed. The safety signs along the way return to their place in the remote background of your mind. The tension is over—no sale!

You see, the idea is very simple. Instead of concentrating upon the fact that an article is chromium plated, solid mahogany or all wool—find out what these

things do to relieve the customer's personal tensions and talk about the tensions. Folks who are ill prefer to talk about their ailments rather than about the cure. You'll be sympathetic in dealing with tensions; yes, even in providing tensions. So let's get down to the uses of this principle.

There's great flexibility in the use of tensions in selling. Following are some suggestions:

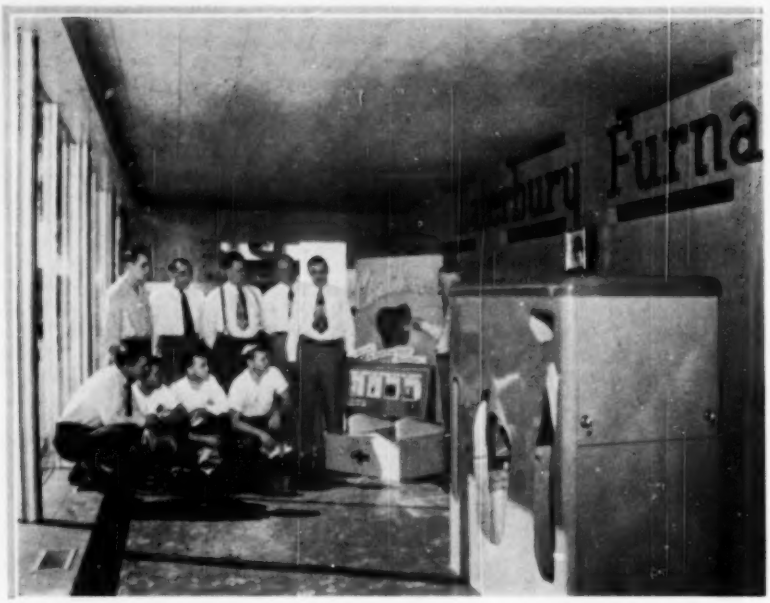
Search for existing tensions. You'll have plenty of competition here for most manufacturers have been leaning upon existing tensions and stopping there. It is no secret that women are influenced by color in buying. If you use that tension as your chief selling instrument you will have to share the existing market with all your competitors. Ask those who buy from you, just why they buy from you—specifically. What is there about your product that outshone competition. Then why was the purchase made in July instead of the previous February or the following October. You'll learn a lot about people and their relationship to you. This is a splendid foundation for any sales expansion. If, for instance, I find that you buy my brand of cigars because you feel "it's a man's cigar" and I trace that to our hunting scenes on the box and in advertising; then I'll know how to sell another man who also wants "a man's cigar" (i.e. hates weak, feminine mood selling). Don't be content with good business—find out why it's good—get the pattern and cut your future selling to the fit of those who are not buying now. Some years ago a wise person found a nation-wide nervous tension existed. It was already there. Everyone was chewing his nails. So he invented a Yo-Yo top to keep their hands occupied and made a fortune relieving an established tension. The portable radio is a relief from a tension established by the home radio when you walk away from it. These are all psychologically sound principles.

Adopt new tensions that did not exist before. This is based upon the sound theory that business cannot grow unless it creates markets. A man owns a radio in his living room. He is contented. You cannot sell him another radio unless you upset his contentment. So you create a tension—you suggest how uncomfortable it is *not* to have a radio in his bedroom. You have thus created a tension that probably would never have existed without you. You adopt it as a normal part of living, sell it to the prospect and, having burdened him with a tension, you proceed to show him how to relieve it by buying a radio set made "especially for the bedroom" (especially for the tension you have adopted). Hundreds of every day needs were once the extended imagination of a manufacturer looking for a means of creating a vacuum into which his product would be drawn. The cosmetic maker who devised a special lipstick for brunettes and one for blondes and another for redheads was actually developing new tensions in the minds of these prospects, which no other lipstick would satisfy. The smell of coffee produces coffee-hunger. So a smart restaurant operator blows coffee aroma out of his shop on cold winter days. You pass by wondering if you'll get to your next appointment on time. Coffee is remote from your mind. Suddenly you sense the aroma, then tension takes root and in an instant you are justifying the time you will lose by stopping off for a cup of coffee. The smell of coffee disrupted your thinking but you do not resent the intrusion. You suddenly have a problem, a tension, and you set about adjusting your life to it. That means a sale to the restaurant man. You might say that, for a small fee, he will remove your tension and send you on your way again. The world is filled with people buying things to alleviate created or adopted tensions. Not too many years ago we got along very well without ice cream in the winter. Somebody created a sense of discontent which only ice cream can satisfy, and even though it may be a cold winter, we buy ice cream.

An American organization operating a plant in Central America found that native employees

(Please turn to page 252)

J. ARCHER KISS, author of this article, has been a frequent contributor to American Artisan in the past. Many effective presentations on sales topics have appeared under his byline. The method of using human tensions to clinch a sale is one of the most interesting sales approaches developed in some time. Mr. Kiss logically brings out the points supporting his theory.



An attractive display of equipment for sale does much to whet the interest of the prospect who visits your shop.

C. E. McDONALD
The Waterbury Co.
Minneapolis

You Control Your Sales Future

THERE is a prospering restaurant in downtown Minneapolis where "Turkey is King." The owner of this unusual establishment specializes in serving good turkey in a variety of styles. Good food and individuality have made this restaurant popular on a street where there are many fine eating places.

New customers, who happen to come into this restaurant, may not notice the pleasant, middle aged lady who wanders among the tables. This affable lady is not the hostess, and yet she is as much a part of the attraction as the flavor of delicious turkey on rye.

Now and then she is invited to join a party of diners. There is no charge for her service. She joins the guests at their invitation only; and almost immediately, becomes one of the party. If you are young enough, she might remind you of your mother, whose wise counsel you cherish when mundane problems are extraordinarily perplexing.

In some strange way, however, this woman is different; she is mysterious and seems to hold an unusual power, beyond the wisdom of age and experience. You simply cannot make yourself consider her as being a fortune teller and clever palmist.

As you talk with her, you find yourself willingly giving credibility to her amazingly accurate analysis of your personality. You think to yourself, as she foretells your future, that here is the sage of sages. After she has departed, you are frightened by the thought that anyone merely human could be the possessor of such profound knowledge. It was worth the tip you so eagerly urged her to accept for that wonderful peek at your future.

Read Your Own Future

Save your money! You may see into your own future and without the aid of a crystal ball, or the lines in your palm. Your future is not even based on what you have done under certain conditions in the past.

This may sound absurd, when economic conditions are becoming more normal than at any time since

1941. However, this normality is taking on new characteristics, and is likely to project far into the future.

As this is being written, government facts indicate that more United States savings bonds will be purchased this year than any year since 1945. This land-office rush for safe savings is being made in spite of the fact that hundreds of thousands of people are still living in quarters which they have long considered inadequate.

The next time you take the family for a spin in your new 1949 custom deluxe, look around. You will notice the phenomenal number of old, faded cars that are narrower on the inside, higher on the outside, and still being driven by some of your most substantial neighbors.

He Couldn't Afford It!

A fellow I know owns a modest summer home on the shoreline of Lake Minnetonka, just outside Minneapolis. Lake homes are popular places for hot weather relaxation; and on weekends, the long driveway to Harry's Haven is lined with the bright, new cars of some of the leading citizens of the Twin Cities. One Sunday afternoon this past summer, a prospering local retail merchant turned into the drive and parked his immense, old 1927 car next to one of the sleek convertibles. The contrast was readily noticeable, and to the friends of this merchant the topic of much humorous comment.

The day was a hot one, and driving this old monster all the way out to the lake must have made the summer heat seem hotter. Another man might have taken exception to the heckling regarding the old car; but not this fellow. He joined the group on the porch and admitted that, "It looks like hell, but she still runs good, and I can't afford a new one!"

No one in this group had more than the usual economic problems for people in their position; yet, everyone seemed to sense the logic in their friend's attitude.

This is one singularly unimportant incident; but its continual repetition in almost every field of merchandising has contributed toward establishing the present buying trend. Our banks are bulging with private savings; people, however, are buying only what they absolutely need, and each purchase is made after extensive shopping.

Buyer Is Boss

A buyer's market identifies the situation as normal. The fact that people could greatly increase their purchases and do not, is the new twist to our past established form of normality. This is the market in which we must sell our equipment and services.

You do not require a fortune teller to look into a crystal ball and tell you what to do. Your problem is the same as your competitor's down the street. The solution is simple. The one who offers the best merchandise at the most reasonable price, and provides the most cordial service will remain in business longest.

This is certainly a simple statement on the surface. Now let us examine the implications.

Competitive selling is the attempt to convince a prospect that your product is a better buy than that which your competitor is simultaneously offering to the same prospect with the same supporting arguments. It is predominant especially in merchandising items that are manufactured on factory production lines. Heating and air conditioning equipment definitely belongs in this category.

The trick is to convince each prospect that yours is the best buy. You cannot charge your customer for the best, however, then give him mediocrity and expect him to send his friends in to purchase some of the same. Also, you cannot pad your installation charges in order to cover the inefficiency which you know exists in your shop.

It would be worth while to write down these facts and keep them handy as a reminder when figuring a job for a prospect: The average prospect has the purchasing power; he is not looking for the cheapest product; he is looking for the best value his well guarded money will buy.

The Waterbury Office

Naturally, the first impulse is to dispute this assertion that quality and lower selling prices should be maintained at the same time. You find it difficult to reconcile yourself to the continuance of high hourly wages concurrent with price reduction. If you are practical you will, realizing that it will be a long, long time before wage rates in our industry are based on the cost of living index.

No, the situation is not ridiculous. There is only one market in which to sell your merchandise; and long term labor trends are firmly established. There are, however, some things over which you personally have control, that determine your position in relation to that of your competitors.

Pull yourself loose from that soft swivel chair, and walk to the rear of your shop. Do an about face and start strolling toward the front door of your business. You should be able to tell by looking around whether or not you are operating efficiently.

If you are in doubt, conduct a detailed cost analysis. Delve into every phase of your operations. Find the answer to important questions such as the following:

1. Can you buy for less certain items you manufacture.
2. Is your stock control system foolproof.
3. Do you have the best possible price on services you buy from plumbers, electricians etc.
4. Do you actually install certain types of jobs at a loss, which are not noticeable overall because suc-

(Please turn to page 246)

Cost Control Guards Profit

ARTHUR ROBERTS
Pompton Lakes, New Jersey

As costs of doing business continue to mount it becomes increasingly important to have an accurate picture of costs at all times. A loss which can be discovered immediately can be eliminated. If it continues unheeded it will be disastrous.

BECAUSE BUSINESS was exceptionally active during the seller's market, the average *Indoor Comfort* dealer or sheet metal contractor paid little attention to cost control and hasn't revived his interest in it so far in this buyer's market. It is imperative now that more attention be given to costs to keep them to a minimum and profits at a maximum point.

Here are 12 rules for better cost control.

Here are the rules!

1. Maintain an accounting system that presents business figures accurately and records all costs. Roughly, any expenditure to do business is a cost, but unless the system is adequate and accurate, all costs may not be charged properly, and thus produce a distorted idea of profits. If the bookkeeping system is not effective, have a dependable system installed. This is the starting point.
2. Prepare a profit and loss statement monthly. Today, it is unwise to wait a year or six months before determining profit earned on operations. It is necessary to keep operating figures current by means of the monthly statement. If six months or a year pass before a review of the figures, money may be needlessly lost. Purpose of cost control is preventing losses. If many months intervene between business statements, the business may show losses running back for some time; losses that can't be prevented because it is too late to do anything about them. When a statement is issued monthly and figures show economies that can be effected, corrective action can be taken immediately thus keeping loss to minimum.
3. Analyze business figures. Recording figures accurately is essential to cost control, but constitutes only a historical record of operations. The figures must be analyzed to determine whether the business has been managed intelligently. Intelligent analysis is a matter of comparison. To know how fast you are traveling in a train you must make a comparison with the receding landscape. To keep effective control of costs they must be compared with costs in prior periods. This gives a yardstick against which to check current costs. It will show whether over-all cost or certain specific costs are increasing unduly or some costs show greater increases or decreases than others.

Good analysis needed

Do not compare this month's costs with the costs of the prior *calendar* year. Many contractors do this. It isn't dangerous in a rising market, or when an economy is moving upward to a higher price level, but when business volume is dropping, it is misleading and hazardous.

Don't follow calendar

Make a comparison with the twelve months immediately preceding, thus the current month's

Conditions change

costs are compared with the average costs for the *prior twelve months*. Comparing this month's costs with those of the prior *calendar* year uses figures that go too far back. So much has happened in the meantime that these costs are too old to be dependable as guides.

For example, say that in November 1949 a comparison is made of the month's costs with the profit and loss statement figures for the year 1948. These figures date from January 1948, almost two years prior to November 1949. Obviously, the figures on the 1948 statement are too old to be safe guides to operations now, because many things have happened to costs in that long period. Conditions are changing and the pace may quicken in the future, so the reader should limit the comparative period to no more than the prior twelve months. In some cases, he may find it advisable to restrict this to the prior six months, if the price level goes lower or if costs change considerably.

Keep the profit and loss statements in a binder so that it is possible to compare them conveniently from month to month or period to period.

4. Use percentages when making comparative analysis. Depending entirely upon dollar figures, may give an unreliable answer. Always figure sales as 100 per cent; thus, if sales are $100,000 and rent $2,000, the ratio to sales is two per cent for this cost.

Wear and tear

5. Depreciation. Make certain that costs contain a charge for wear and tear on business property, office equipment, shop equipment, trucks and showroom fixtures. The percentage depends upon cost of depreciable assets and their useful life. If equipment costs $2,000 and will last for ten years, charge $200 a year for depreciation under overhead expense. If depreciation is not included in costs, profits will be cut.

6. Restrict overhead expense. If this expense is too high, the business won't earn a profit even with careful buying and vigorous sales promotion. To some extent, overhead can be controlled by keeping down waste and extravagance, which have grown high during the seller's market. One can go only so far however, because some costs cannot be cut.

These are fixed costs, such as rent, ownership expense, property taxes, depreciation, mortgage interest, and most insurance expense, also interest on long-term indebtedness. Such costs remain the same regardless of sales volume. For this reason, if fixed costs are high, it is necessary to promote sales aggressively. Sales volume can be boosted and fixed costs won't change, hence, profits increase. Other costs, such as light, office supplies, advertising, etc., are variable costs. They increase with sales, but not in the same ratio.

Spend More To Cut Costs

7. Increase the promotional budget. In a buyer's market the businessman must spend more money for advertising and selling effort. But, some may argue, "You've been telling us to cut costs and now you suggest that we increase costs by spending more for sales promotion". Strange to say, spending more for business promotion in a buyer's market, helps cut costs. Here is why. To keep any business running involves certain normal expenses. It is not possible to reduce costs below this figure and maintain any semblance of service to customers. However, increasing promotional expenditures brings in more business and reduces the percentage of over-all costs to sales, increasing profit.

8. Modernize shop equipment. Costs can be cut this way. Old equipment in a shop is more expensive to operate than new equipment, which does a better job and secures more customers. More customers increase sales volume, reducing cost ratio to sales. Cost of modernized equipment is not included in operating expense because it is an asset. However, depreciation on equipment is an expense.

Many businessmen obtain new equipment without cost because they buy it on time and pay the installments out of additional profits they earn from modernization. This is a good idea. The equipment costs only the down

(Please turn to page 248)

If You Lost Money in 1949—

BETTY LEE GOUGH
New Orleans, Louisiana

IN SOME ways, 1949 was a tough year. Business suddenly became competitive again, and in the switchover from a seller's market to a buyer's market, a lot of *Indoor Comfort* dealers undoubtedly got hurt.

But, if you ended this competitive year with a net business loss, there is still one ray of hope, and a fairly substantial one at that. It is possible to get back some of the money paid in taxes on the prosperous operations of 1948 and 1947. Uncle Sam isn't as hard-hearted as he usually seems when the time comes for paying income taxes. The Government recognizes the fact that an unprosperous year may be preliminary to a big year in the next twelve months (or the switchover year from boom prosperity to normal prosperity). So, if you entered the final figures on your profit and loss statement with red ink—you can still recover some of your losses.

The procedure for receiving a tax refund on previous years is not very well known. But the law provides for it. Here is what the United States Department of Commerce has to say on the subject:

Adjusting for Loss

"The federal income tax law permits a business enterprise to reduce its tax bill by using an operating loss in one year as an offset to income in the two immediately preceding and two succeeding years. If you have a large loss in a given year, you may be able completely to wipe out your income tax in these four years in addition to the loss year. These provisions of the law have been of especial interest in recent years because they have allowed an established business to balance, taxwise, reconversion-year losses against war-year profits through a loss carry-back and tax adjustment. They also permit a new postwar business to carry forward losses, which are incurred in the early years of operation, to obtain a tax cut in the first years of success. For the carry-back years you can obtain a credit on current unpaid taxes or a refund, depending on your own tax payment situation. In effect these provisions mean that your taxable income is averaged over a five-year period and that the government is sharing your operating losses as well as your income. It is vitally important to small enterprises to be able to balance a current loss against past and future income in this manner. These firms are not likely to have the reserves needed to carry them over bad years. Even one loss year could easily be fatal.

"The loss carry-back and carry-over provisions of the income tax law apply in the same general way to corporations and unincorporated firms, but there is a different treatment of the two groups for certain specific items in the tax return. In the case of corporations, the carry-back may result in a credit against wartime excess profits taxes."

The procedures for unincorporated businesses (individual ownerships and partnerships) are not simple, but they are not as complicated as those of corporations. Since the services of a tax attorney or accountant are necessary in corporation returns anyway, we'll look at the tax refund problem of the individual owner of an *Indoor Comfort* business, or the partners who control one.

There are three things to do in order to get a carry-back tax adjustment, as the government calls this kind of tax refund on previous years' income taxes. They are:

1. Compute the loss.
2. Make adjustments to amend the tax returns for the back years—in this case, the 1948 and 1947 calendar year tax returns.
3. Finally, must file with these schedules the Treasury Department's Form 843 (which is a claim for refund), or Form 1045 (which is the Application for a Tentative Carry-Back Adjustment).

Let's see in detail how these three steps are carried out.

A net operating loss is the difference between business expenses and the gross income from business transactions. It would be the loss shown on Schedule C of the income tax return if the cost of material and deductions exceeded receipts. In computing operating loss or profit, it would not be customary to include such items as loss or gain on sales of securities or real property holdings held personally.

Meaning of Loss

"Under the federal income tax law," points out the Department of Commerce, "a net operating loss has a broader meaning. It is the loss on the operations of a business after certain tax exempt and nonbusiness income and deduction items are taken into account. These additional items are brought into the picture in a manner which usually makes the statutory net operating loss smaller than the real business net operating loss.

"These adjustments are required if your tax return

Get a Tax Refund

A PROVISION of the income tax regulations which may not be generally known allows the balancing of operational losses with profits recorded in previous years. The procedure is not excessively difficult.

contained capital gains and losses, depletion, income and deduction items not connected with your business, or a net operating loss deduction as a carry-over from another year.

"An adjustment is also required if you received interest on tax exempt securities.

"If you are not affected by any of these adjustments, your net operating loss is the loss that you showed in Schedule C of your income tax return.

Changes in Return

"In computing your loss, start with the income tax return that you filed for the loss year. Certain changes must be made in the income and deduction items in that return, and certain items not included must be taken into account. If you filed a joint return, your net operating loss should be computed on the basis of the combined income and deductions of both you and your wife. All adjustments required in the income and deduction items must be made as if they were for the income picture of a single person. If your wife has income but is not engaged in a business, a joint return will usually show a smaller operating loss, and hence less tax relief.

"If interest was received on securities that are exempt from taxation during the loss year, this interest must be added to total income. However, if interest was paid on a loan obtained for the purpose of buying these tax exempt securities, it is correct to deduct interest *paid* from interest *received*, and include the net amount as an addition to total income in computing loss."

For example, let's say the income on your tax return (this, remember, is for a prior year) was $5,500.00 You received $1,500.00 interest on tax exempt securities. But you borrowed money to purchase the securities, and had to pay $500 in interest to the bank. So *net* interest you received was $1,000.00. Your income, for tax refund purposes, then becomes $6,500.00—the original $5,500.00 income, plus $1,000.00 *net* interest received.

In your 1948 and 1947 income tax returns you were permitted to take certain deductions for outlay not connected with the operation of a business. For operating loss computation, limitations are placed on these deductions. The total allowed for these items cannot exceed the total amount of income received from activities outside your business—unless you have a net nonbusiness capital gain. If you have such a gain, your nonbusiness deductions can be equal to your nonbusiness income plus your net nonbusiness capital gain. Any nonbusiness deductions left above that sum cannot be included in computing your net operating loss.

The Department of Commerce advises that, "if you included capital gains or losses in your tax return (Schedule D), it will be necessary to reclassify these items by grouping them into business and nonbusiness gains and losses. Each group must be treated separately in figuring net operating loss. Long-term gains and losses (on assets held more than 6 months), which were figured at only 50 per cent in Schedule D of the

(Please turn to page 256)

We Are Older Than We Thought

For many years American Artisan has assumed that 1880 was the year in which the magazine was founded. A single copy dated Feb. 1874 turned up in the office and led to research which resulted in discovery that Volume 1, Number 1 of American Artisan was issued on May 11, 1864.

The new magazine was described as "a weekly paper devoted to the description and illustration of new inventions and improvements in arts, manufactures, and machinery."

With this issue the volume number will coincide with the actual age of the magazine. Thus, Volume 87 indicates the 87th year of publication. Next month an article will present some interesting highlights of past issues, showing the development of the field of warm air heating and sheet metal contracting.

Arnold Kruckman's

Washington Letter

Vital Legislation To Be Debated

UNDER the enthusiastic leadership of Senator Joseph O'Mahoney (D.-Wyoming), the senate and house economic committee will start the new year with an investigation into the reason for the hoist in steel prices. O'Mahoney, who is a liberal in the most extreme sense of the word, set his staff to working early in December, immediately after the steel companies announced the average $4 per ton raise. The senator contends that the steel companies made huge profits and should meet the pension-labor increases out of their "fat", as it were. The hearings will start early during the session in January, and will undoubtedly be full of color, drama, and personalities. O'Mahoney used to be a newspaper reporter and editor in the wild and woolly days of Wyoming, and he knows what to do to make his hearings newsworthy. There will unquestionably be a procession of the highest officials in steel and the general economics of the nation.

President Tower of the American Iron and Steel Institute released a year-end statement in which he brought out that during 1949 the steel industry had its loftiest and its lowest recorded depths of production, making, however, 77 million tons of steel during the 12 months of 1949. He forecast a strong start for 1950. He expects 1950 to bring post-war production above 400 million tons. He anticipates the high cost caused by pensions and other benefits will increase, and believes these costs will eliminate many operators in the middle and lower brackets. The Netherlands, Luxembourg, France, Britain, Belgium, South America, and other countries are being prompted by ECA and ECA dollars to expand their iron and steel programs, with increasing competitive shipments to the United States. This has drawn from the institute people the remark that the so-called protective tariff on steel has not been touched for more than 20 years, and that the tariff today is nominal. They wish to come to Washington to urge Congress to raise the tariff wall on steel substantially. The reciprocal trade treaty operation apparently has not been an advantage in keeping competitive steel out of the United States. The situation seems to be that not enough steel can be brought from abroad to provide sufficient volume of supply, but that enough is brought in to be annoying to the industry. And, obviously, with the expansion of productive facilities abroad, plus the rather puzzling resources of India, the industry looks to the imposition of a protective tariff to regulate the flood of steel that may come from low-living-standard countries.

Congress a Battleground

The present session is the continuation of the much lampooned 81st congress. When it quits at the end of this year, it goes out of existence. This year every member of the House must be re-elected and a third of the Senate must stand for re-election. There is every indication that the White House, under the Truman banner, will try to control choosing members of the House and the Senate. It is assumed labor will organize those who live in metropolitan centers, and that farm elements will team up with the labor-city crowd to focus the vote on the type of politician who is acceptable to Truman. The fight on pending legislation will largely be determined by the question of whether an issue is pro-Truman or anti-Truman. Some decisions which will come out of this session will have a profound effect upon all future destiny of this nation—and may have serious effect upon world affairs. Among the lesser bills which are to be driven through is the proposal to supply $300 million to pay teachers' salaries in states which are short of funds. The Senate has already enacted the bill. Of course, one of the most quarrelsome issues will be the debate on the proposal to revise the Taft-Hartley law. President Truman wants the existing law taken off the statute books. He has told Congress it must repeal the act, and substantially rewrite it so it will come close to labor's demands. Congress is in a quandary in relation to this problem. It will be damned by people who have the necessary votes if it doesn't repeal; and it will be damned by people who supply the cash for the campaigns if it does. Naturally there will be some fancy double-talk and an attempt to avoid doing anything.

Washington Letter

Another bill which is full of the sort of trouble to which congressmen are born is the proposal to authorize the home and house financing agency and its many cousins to do for the middle-income people what it does to the tune of $30 billion for the low-income group—build homes which they may rent at about one-third of the normal rental. The deficit is naturally made up by the tax-payers.

Benefits for All

If the housing enthusiasts have their way, upwards of two-thirds of the working people of the nation will live in low rental dwellings, largely at the expense of all of us. With billions to pay rent for those who cannot pay all of it themselves for the kind of homes in which the Utopians think they should live; billions we are to supply to pay pensions, benefits, and the huge defense programs; and billions to lift Europe out of its slough of communistic despond; it is literally difficult to calculate where all this money is coming from, even if we have a gross national income approaching $260 billion. When you contemplate this picture you begin to understand why everyone in Washington in contact with government affairs is constantly under pressure from young people to help them secure jobs in government, because they think government jobs mean security. It appears youngsters today are quite ready to surrender some of their individual freedom to get a job that promises safety—or security. When you hear these late products of higher education clamor for safety, you wonder what has become of that spirit of adventure which was the hallmark of American youth a half century or so ago. It was largely this willing zest to take a chance that made America the great nation the safety-first generation brags about.

Another bill which clearly reveals what we are coming to is that proposal to establish nine regional authorities. The authority came to us first in those smaller and more reasonable adventures which were called port authorities, and similar undertakings, designed to blend the functions of the Federal government, the municipal governments, and the states and counties. It was an effort to economize by avoiding duplication of functions in places like New York City and state, and New Jersey and its municipalities and counties which abut on the Hudson River and upon the bay. The form was good and appealed to those who planned the job of bringing sweetness and light to the people who lived in the valley drained by the Tennessee River. Thus was born the Tennessee Valley Authority. The authority as exemplified by the TVA slices off a part of the power and prestige of several states; it gradually dominates the municipalities within its borders. It has control of huge largess in the shape of Federal Funds. It is dominated by boards and by rulers who make you think of the satraps who functioned on behalf of the imperial rulers in the far reaches of ancient empires. These rulers represent Washington, and rule with the code and the habit of the capital. The system gradually wipes out the integrity of the states and welds parts of the states into a unit that is a regional entity. This unit is built upon a similar geography, a like economic destiny, and similar harmonious consistencies, with a principal river as the core, the spinal chord. The bill which will come before Congress proposes to establish nine such regional authorities upon the foundation of nine major waterways. The nine authorities would take parts of every state in the union. It is doubtful whether the states could survive as independent political subdivisions with the overlordship of a Federal authority. And if the current trend in this country continues, these authorities would inevitably help to socialize our republic, or what is left of it. Incidentally, this idea of setting up regional integrates for political and economic and social purposes is popular in all parts of the world where collectivism is prevalent. They are talking about setting up such an authority with the Rhine as the key stream; and another on the Danube, etc. It makes a fine physical structure for the Welfare State.

Socialistic Trend

There is little doubt the obnoxious excise taxes will be repealed, or at any rate, modified. Congress will do a lot of talking about the repeal of other taxes, but will do nothing to make its talk effective. Our expenses are stupendous, and we constantly pile on more expenses. It is possible some of the thought behind all this may be intended to operate something like the present mechanics of socialization of Sweden. This firm little country is completely socialistic in purpose. Its people are said to like it because socialism is an intimate thing which appears to work effectively where the group has something of the consistency of a family. Sweden still has privately owned industries and commercial activities. But the system is so organized that the profits gradually are absorbed by the state; it is estimated in 50 years there will be no private business left in Sweden. Everything will belong to the government. Meanwhile, the owners know it. They get profits

(Please turn to page 242)

SMCNA Warm Air Heating Ordinance

For some time past the Sheet Metal Contractors' National Association has had a committee at work developing a warm air heating code in ordinance form. The project has been completed and the code is published herewith. It is suggested that cities and towns will be able to utilize this ordinance intact.

AN ORDINANCE TO CREATE a Warm Air Heating Board; to prescribe the powers and duties of such Board; to provide for the licensing of those who wish to engage in the business of warm air heating and to qualify as such under the provisions of this ordinance; to require permits for the installation of warm air heating equipment and appurtenances; to provide a procedure for the revocation of said license; to provide penalties for the violation of this Ordinance and to repeal any parts of this Ordinance in conflict with local regulations

ARTICLE I

Section 1—Whereas, warm air heating equipment can be installed in a manner so as to endanger life, health, and property and;

Whereas, there have been complaints of improper and unsafe warm air heating installations, and;

Whereas, in order to obtain and provide a means for the protection of the public against the installation or repair of warm air heating systems in an improper manner;

Therefore, be it ordained by the ..... of .....

ARTICLE II

Section 2—It shall be unlawful for any person, firm or corporation to act, engage in, or to advertise, or to otherwise represent themselves as a warm air heating "contractor", unless an authorized representative of such person, firm or corporation shall first obtain a warm air heating license as provided in this Ordinance.

Section 3—In case of a person, firm or corporation employing a warm air heating license holder, both said person and firm or corporation and the warm air heating license holder shall be responsible for all violations under this Ordinance.

Section 4—An applicant for a warm air heating license shall be at least twenty-one years of age; a citizen of the United States of America; and shall have had at least ..... years practical experience in warm air heating, as defined in this Ordinance, or shall have satisfactorily completed a course of study in warm air heating given by a recognized school plus one year of practical experience in warm air heating, or shall be a graduate mechanical engineer.

ARTICLE III

Office of Inspector

Section 4—Appointment, title, and time devoted to work.

There is hereby created the office of inspector for gravity and mechanical warm air heating, stoker, natural and artificial gas burner, and oil burner installations. This inspector shall be known as "inspector of warm air heating"; and shall be appointed by the board of public safety, subject to the approval of the board of public health, or by such municipal board as shall be designated, or any civil service agency designated. He shall give his entire time to the performance of the duties of his office and shall not during his term of office be employed or engaged, directly or indirectly, in any manner with any person eligible for license as provided herein, or enter into any contract for work for others, covered by this Ordinance, or for furnishing materials, plans or specifications for others.

Section 5—Oath.

The warm air heating inspector and/or assistants shall, before entering upon his duties, take the oath required by law for city, state or county officials.

Section 6—Qualifications.

The warm air heating inspector shall have had ..... years' practical experience in engineering, planning, supervising and contracting for installations of warm air heating; or shall have at least ..... years of such practical training and in addition have satisfactorily completed a course of study in warm air heating given by a recognized school, and must have some knowledge of the operation of gas and oil burners and stokers. His work shall be coordinated with that of the building department.

Section 7—Term of Office.

The term of office of the warm air inspectors and/or assistants, shall be in accordance with local regulations.

Section 8—Duties.

The duties of the warm air inspector shall be to examine and approve when correct, all plans and specifications for the performance of any work governed by this Ordinance; to point out in what respect such plans or specifications are defective or in violation of this Ordinance; to inspect all work in the area covered by this Ordinance for which permits are required under this Ordinance and to see that all such

work is performed in accordance with the provisions hereof; to stop any work being done in violation of the terms hereof and to post "stop work" signs therefor; to order any such work removed or corrected to conform herewith; to issue certificates of approval on satisfactory completion of projects; provided, however, that no "stop work" order so posted shall affect work not governed by this Ordinance except where the progress of any such work would interfere with inspection of work governed by this Ordinance. An inspector shall have the right to enter upon any premises or into any building or enclosure where he has reasonable cause to believe work is being done, or has been performed, in violation of this Ordinance, which violation might be a menace to life or health, for inspection of such work.

ARTICLE IV

Board of Warm Air Heating

Section 9—There is hereby created a Board of Warm Air Heating to examine applicants for a warm air heating license to supervise or perform any installation of work governed by the provisions of this Ordinance.

Section 10—Such Board shall consist of five members: (Suggestion, a representative of the fire prevention bureau; two or more licensed warm air heating contractors, and other members qualified to examine applicants.)

Section 11—Members of the Board shall be appointed by the Mayor or other designated authority.

Section 12—Initially, two members of the Board shall be appointed for a term of one year and the balance of the Board, and all future appointments, shall be for a term of two years.

ARTICLE V

Duties of the Board

Section 13—The Board of Warm Air Heating shall make such rules and prescribe such procedure as may be necessary for its operation in conformity with this Ordinance.

Section 14—Its decisions shall be concurred in by at least three (3) members of the Board.

Section 15—It shall have complete control over the examination of applicants for warm air heating license under this Ordinance, and shall decide upon the qualifications of all applicants.

Section 16—Written examinations of applicants shall be conducted at least once each calendar quarter, at such times and places as the Board may designate. Questions shall only pertain to application and procedure of this Warm Air Heating Ordinance.

Section 17—A suggested passing grade shall be seventy-five per cent of a possible one hundred per cent. Any applicant who shall fail to receive a passing grade shall be eligible to again apply for examination in the following calendar quarter. The Board shall keep an accurate record of all applications for examination, of the examinations given, and the results thereof, for a period of three (3) years in such depository as may be designated, same records to be open to public inspection.

Section 18—The Board shall certify to the proper authority the names of all successful applicants for a warm air heating license, and shall issue a recommendation for the issuance of a warm air heating license upon the payment of the proper fee.

Section 19—The Board shall have the authority to suspend or revoke any warm air heating license granted under this Ordinance for violations thereof after due hearing as hereinafter specified.

ARTICLE VI

License

Section 20—It shall be unlawful for any person, firm or corporation to install, erect, alter, repair, service, reset, replace any warm air heating system, or parts, or appurtenances thereto, as defined in this Ordinance, unless said person, firm or corporation shall first have obtained a warm air heating license hereunder, or unless such person, firm or corporation has regularly and steadily in his/its employ a holder of such a warm air heating license, who shall be the authorized representative of the person, firm or corporation in all matters pertaining to this Ordinance.

Section 21—Should the authorized representative holder of a warm air heating license terminate his employment, or partnership, with such person, firm or corporation, a new authorized holder of a warm air heating license must be obtained within sixty days thereafter.

Section 22—Application, examination, experience and equipment.

No license shall be issued unless the applicant shall produce evidence that the applicant has had not less than ..... years' previous experience in warm air heating, and that a place of business is or will be maintained by such applicant or by the person employing such applicant within the area covered by this Ordinance, equipped with tools, and any other equipment required to contract for and perform any operation of work governed by such license in a substantial and workmanlike manner. If a warm air heating contractor shall maintain more than one establishment or shop for the transaction of business, then said contractor shall maintain a holder of a warm air heating license in each such establishment.

Section 23—Owners of dwelling houses.

The owner and occupant of a single dwelling house may, with the assistance of any member of his family and household, personally carry on in such house any work governed by this Ordinance without such license; provided, that such owner shall obtain a permit for any such work and shall call for inspection as hereinafter provided.

Section 24—Issuance of License.

Any applicant having fully complied with the provisions of this Ordinance and having successfully passed said examination shall upon recommendation of the examining board, signed by a majority thereof, be issued a license to supervise and perform warm air heating work, upon the payment of a license fee of ..... dollars for the first year's license and upon furnishing a bond in the penal sum of ..... dollars with surety to the approval of the authorized authority, conditioned for the faithful performance in accordance with the provisions of this Ordinance for all work performed under said license and for the faithful compliance with the provisions of this Ordinance.

Section 25—Renewal.

Any such holder of any such license shall, upon payment to the authorized authority of the fee of ..... dollars, be issued a renewal thereof for the second and any subsequent year, provided that said bond is renewed or like bond furnished for such renewal term; provided, however, that on the failure of any such licensee to apply for and to pay for a renewal of said license on or before January 15 following the expiration of the previous year's license, such licensee shall forfeit such existing license and it shall be unlawful for any such person to perform any work governed by this Ordinance until such time as a renewal license is issued.

Any such license forfeited for nonpayment of the renewal fee may be reinstated upon the payment of the annual renewal fee plus one dollar for each month or portion of a month that such delinquency has continued; provided, however, that after such license has been delinquent and not in force on March 1st, then the same shall be null and void and may not be renewed.

Section 26—Any person, firm or corporation having been engaged in the warm air heating business for a period of one (1) year prior to the effective date of this Ordinance, within the area covered by this Ordinance, shall, upon payment of the regular fee, and otherwise complying with this Ordinance, without taking an examination, be granted a warm air heating license to expire on December 31st next. Same may be renewed as provided for in Section 25.

Section 27—Issuance to individuals; not transferable.

The license herein provided for shall be issued only to an individual, and not to a corporation or firm; and such license shall not be transferable.

ARTICLE VII

Permits

Section 28—It shall be unlawful for any person, firm or corporation to construct or install any warm air heating equipment or appurtenances, such as are subject to the provisions of this Ordinance, in or for any building; or to alter or repair any such existing warm air heating equipment or appurtenances as are subject to the provisions of this Ordinance, without the holder of a warm air heating license first making written application for and securing a permit. Therefore setting forth the nature of work to be performed.

Section 29—Any person, firm or corporation, when applying for a permit shall, upon demand of the warm air heating inspector, furnish all necessary plans in duplicate for the proposed construction, installation, alteration or repair, and with all proper and sufficient information relating thereto, before approval of such plans shall be indicated and such permit be issued.

Section 30—Inspection of new work.

In any new building or addition, immediately upon completion of those portions of the installation which are thereafter to be concealed or covered, the heating contractor shall notify the Heating and Mechanical Equipment Division (or proper bureau), giving the location of the work that said portions of the installation are ready for inspection; and it shall be unlawful for any person, firm or corporation to lath over, plaster or cover up any heating work before such work has been inspected and the building permit card stamped approved. The Heating Equipment Inspector shall have the right and authority to have removed all such lath, plaster or other covering which may have been placed over such work before same has been inspected. The Heating Equipment Inspector must make inspection within two working days after notice, excepting Sundays and holidays. All other inspections (such as old work) to be made immediately upon completion of such work.

Section 31—The above requirement for a permit may be waived, providing such alterations or repairs will not exceed ..... dollars.

If such alterations or repairs will not add to the required capacity of such heating plant and equipment, and are not, in the opinion of the administrators of this Ordinance, of such nature as to render an inspection desirable, the permit may be waived.

Section 32—To fail or neglect to comply with the provisions of this Ordinance and of the permit so issued thereunder, shall be considered a violation of this Ordinance.

ARTICLE VIII

Fees

Section 33—The fees for permits shall be as follows:

For a gravity warm air furnace in a new or old building .....$.....
For a gravity warm air furnace replacement .....$.....
For a forced warm air furnace in a new or old building .....$.....
For a forced warm air furnace replacement .....$.....
For the addition of a blower or fan.....$.....
For the addition of a new warm air or cold air pipes or ducts.....$.....
For the replacement of warm air or cold air pipes or ducts .....$.....
For the installation of a conversion gas or oil burner .....$.....
For the installation of a conversion coal stoker .....$.....
For repair work, when a permit is required .....$.....

Section 34—Stopping Work.

Wherever any work or project governed by the provisions of this Ordinance and for which a permit has been issued, as provided herein, is being performed or carried on in violation of any of the provisions of this Ordinance, it shall be the duty of the inspector of warm air heating to post a printed notice to "stop work" signed by the inspector, on the premises where such work is in progress; and to notify anyone in charge of such work on the premises of such stop order. After the posting of such notice, it shall be unlawful for any person or corporation to do any further work on such project until such time as the defects or violations of this Ordinance have been eliminated to the approval of the inspector and said "stop work" sign has been removed by him, provided, however, that no "stop work" order so posted shall effect work not governed by this Ordinance except where the progress of any such work would interfere with inspection of work governed by this Ordinance.

Section 35—Board of Appeals.

Any person directly interested who is aggrieved by any decision of the inspector or the Board in the execution of their duties, may appeal from any such decision to a board of appeal which shall consist of three recognized contractors for work governed by this Ordinance or holders of licenses hereunder, one of whom shall be chosen by the party taking the appeal, one by the inspector, and the third chosen by the other two members; the appeal shall be taken by the person aggrieved giving written notice of such appeal to the inspector at the office of the building department within twenty-four hours after such decision is made. The selection of the members of such board shall be made at once; said board shall meet within forty-eight hours after the giving of such notice; and shall render a decision within five days thereafter. Any interested party, including said inspector, shall have the right to present the case to such board, whose decision shall be final. The members of such appeal board shall serve without pay.

ARTICLE IX

Gravity Warm Air System: Definition and Installation

Section 36—Gravity Warm Air Heating Systems.

The term "gravity warm air heating system," when used in this Ordinance, shall be construed to mean any and all warm air furnaces enclosed within a casing of any type, and any and all appurtenances thereto or connections therewith, intended to heat any building or enclosure by gravity circulation only, wherein no mechanical force or equipment is applied.

Section 37—(Alternate 1)

The heat loss of the structure; selection of the furnace, registers and grilles, pipe sizes, chimneys; and installation details shall be in accordance with the provisions of the latest edition of Manual No. 5, "Gravity Code and Manual for the Design and Installation of Gravity Warm Air Heating Systems," of the National Warm Air Heating & Air Conditioning Association, edition of 1947; and in accordance with the provisions of Manual No. 3, "Measuring Heat Losses," of the National Warm Air Heating & Air Conditioning Association, edition of 1947.

(Alternate 2)

The heat loss of the structure; selection of the furnace, registers and grilles, pipe sizes, chimneys; and installation details shall be in accordance with the provisions of the latest edition of Manual No. 5, "Gravity Code and Manual for the Design and Installation of Gravity Warm Air Heating Systems" and Manual No. 3, "Measuring Heat Losses" of the National Warm Air Heating & Air Conditioning Association.

(Alternate 3)

Note—When the above two alternates are not permissible under local or state laws, the entire text, tables, details, etc. of Manuals No. 5 and 3 should be incorporated in full in the Ordinance.

ARTICLE X

Forced Warm Air Winter Air Conditioning: Definition and Installation

Section 38—Forced Warm Air Winter Air Conditioning System.

The term "Forced Warm Air Winter Air Conditioning System," when used in this Ordinance, shall be construed to mean one or more warm air heating units within individual housings or within one common housing, one or more motor driven blowers, smoke or vent pipes, individual leader pipes or trunk line systems, or both, with necessary control dampers for supply and return air, automatic controls, registers, faces and grilles; and with provision for other appurtenances such as filters, air washers, ozonators, humidifiers, etc., as may be desired.

Section 39—(Alternate 1)

The heat loss of the structure; selection of furnace size, blower size, registers and grilles, individual pipe or trunk line duct size; register air temperature; controls; and construction details, shall be in accordance with the provisions of Manual No. 7, "Code and Manual for the Design and Installation of Warm Air Winter Air Conditioning Systems," edition of 1947, of the National Warm Air Heating & Air Conditioning Association; and of Manual No. 9, "Technical Code for Warm Air Installations in Larger Buildings" of the National Warm Air Heating & Air Conditioning Association, edition of 1947; and of Manual No. 3, "Measuring Heat Losses" of the National Warm Air Heating & Air Conditioning Association, edition of 1947.

(Alternate 2)

The heat loss of the structure; selection of furnace size, blower size, registers and grilles, individual pipe or trunk line duct size, register air temperature; controls; and construction details, shall be in accordance with the provisions of the latest editions of Manual No. 7, "Code and Manual for the Design and Installation of Warm Air Winter Air Conditioning Systems;" of Manual No. 9, "Technical Code for Warm Air Installations in Larger Buildings;" of Manual No. 3, "Measuring Heat Losses"—all of the National Warm Air Heating & Air Conditioning Association.

(Alternate 3)

Note—When the above two alternates are not permissible under local or state laws, the entire text, tables, details, etc., of Manuals No. 7, 9 and 3 should be incorporated in full in the Ordinance.

ARTICLE XI

Warm Air Ceiling Panel Systems

Section 40—The term "Warm Air Ceiling Panel System," when used in this Ordinance, shall be construed to mean a system of heating wherein warm air is circulated through a ceiling "panel" to provide "radiant" heat.

Section 41—(Alternate 1)

The heat loss of the structure; the selection of the furnace; the blower size; the size of the supply and return pipes or ducts; the area and construction of the ceiling "panels"; the construction details shall be in accordance with the provisions of Manual No. 7-A, "Code and Manual for the Design and Installation of Warm Air Ceiling Panel Systems" of the National Warm Air Heating & Air Conditioning Association, edition of 1948, and of Manual No. 3, "Measuring Heat Losses" of the National Warm Air Heating & Air Conditioning Association, edition of 1947.

(Please turn to page 260)

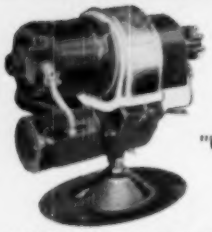
RESIDENTIAL AIR CONDITIONING *Section*

INDOOR COMFORT — IN ALL SEASONS
FOR HOMES AND SMALL BUSINESSES

it's the CENTURY for GAS/OIL Heat

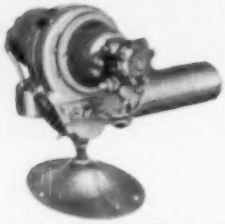
CENTURY ENGINEERING CORPORATION • CEDAR RAPIDS, IOWA

CONVERSION BURNERS (1 to 20 GPH) for Every Size Home or Building



It's "Whisper" Quiet!

CENTURY'S Famous Cushion-Cradled Model "O" Oil Burner for quiet, vibration-free operation. A thick, oil-proof, high-temperature Neoprene rubber-cushion seals off all moving parts from the furnace—soaks up noise and vibration. Easily installed to convert any furnace or boiler into a fully automatic heating plant. Two sizes: ¾ to 2 GPH; 1½ to 5 GPH.



MODEL "L" Conversion Burners. For years standard equipment on the finest automatic oil-fired furnaces and boilers. Time-tested features and simplicity of design provide maximum economy, trouble-free operation, and a minimum of servicing. Model L1C, ¾ to 2 GPH and Model L2C, 1½ to 4 GPH. Larger capacities to 20 GPH, with DUAL ignitions, shown at right.

DUAL IGNITION and TWO-STAGE PUMP Standard on 5 to 20 GPH Models

Exclusive! New Fuel-Saving Century Firing-Head!

STANDARD ON MODEL "O" BURNERS AND MODEL L1C AND L2C BURNERS

Through positive control of primary and secondary air, the new Century adjustable firing-head provides perfect fuel and air mixture to obtain clean, complete combustion from all types of home heating oils, including the newer catalytic fuel oil that is so high in heat units but is so difficult to burn.

For Larger Installations

Century models L3C and L4C are equipped with TWO transformers, TWO sets of electrodes, TWO nozzles. This constant, DUAL ignition and Two-Stage Pump with instantaneous electro-magnetic cut-off make Century safest, most economical for commercial and industrial installations using No. 2 and No. 3 oil. Model L3C, 5 to 10 GPH; Model L4C, 10 to 20 GPH.

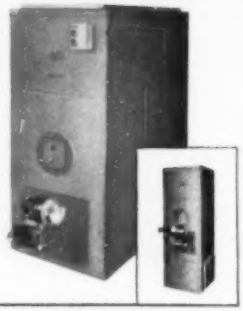
WINTER AIR CONDITIONERS 9 Sizes—Hiboy and Loboy Models

"CRESCENT" SUPER HEATER OIL-FIRED FURNACE UNITS

Tops in economical operation and dependable service. The patented "Crescent" Super Heater extracts maximum heat from every drop of oil—burns any type of residential heating oil. Filtered, forced air circulation. Hiboy and Loboy (basement) models, capacities range from 85,000 BTU to 380,000 BTU. Equipped with famous Century "Cushion-Cradled" oil burner for quiet, vibration-free operation.

NEW "CONVERTIBLE" GAS/OIL FIRED FURNACE UNITS

Economical, healthful, automatic winter air conditioning for homes with or without a basement. Interchangeable burners permit firing with either oil or gas by simple convertibility. Convertible Hiboy with Century Power Vaporizing oil burner has bonnet rating of 60,000 BTU output; with gas burner, input 60,000 BTU; the Loboy (basement) model, with either power vaporizing burner or high-pressure gun-type burner, 80,000 BTU output; with gas burner, input 100,000 BTU.



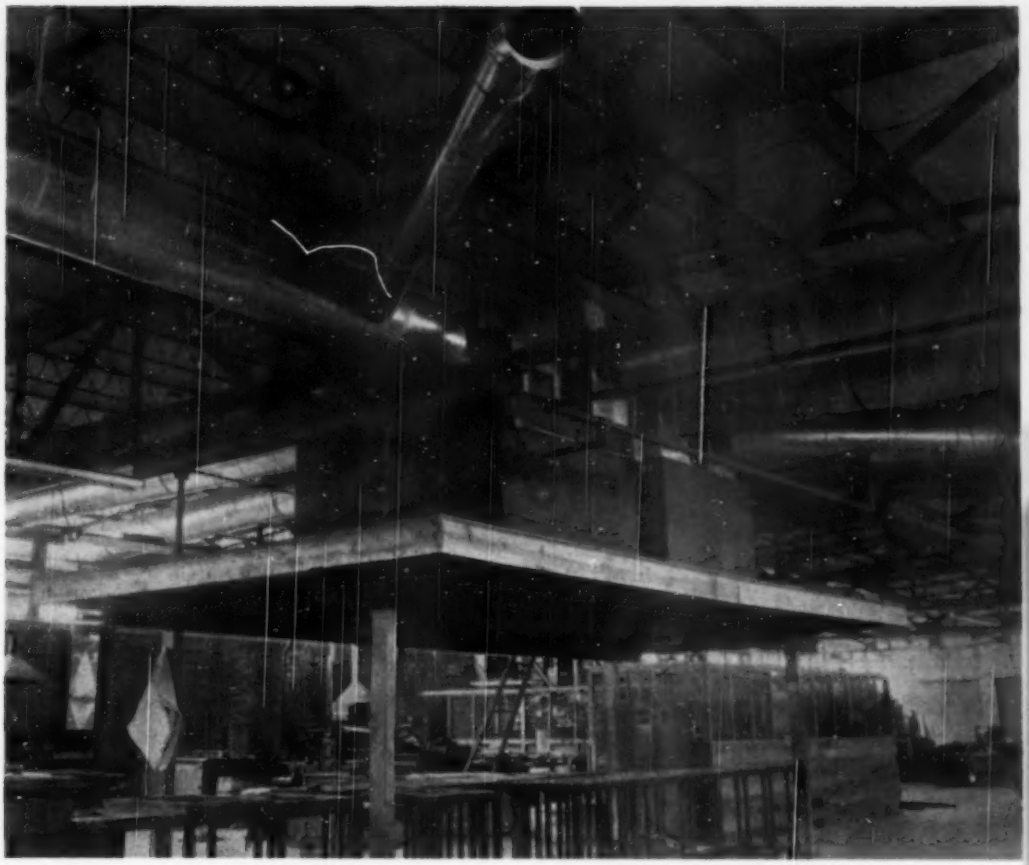
BOILER-BURNER UNITS for All Types of Hot Water Heat

Century Midget Powerhouse boiler with "Crescent" design inner shell permits high efficiency, fast heating. Ideal for all types of hot water heating—radiators, connectors, radiant panels or baseboard. Install in basement, utility room, or kitchen. Three sizes: 380 (86,000 BTU), 560 (132,500 BTU) and 740 (165,000) square feet of radiation. Equipped with "Cushion Cradled" oil burner.

Water Heaters—same as boiler-burner units, with special controls and hot dip galvanized shell. Three sizes: 100, 150 and 200 gallons per hour.

For ILLUSTRATED LITERATURE, prices and full details on any CENTURY equipment, write

CENTURY ENGINEERING CORPORATION, CEDAR RAPIDS, IOWA

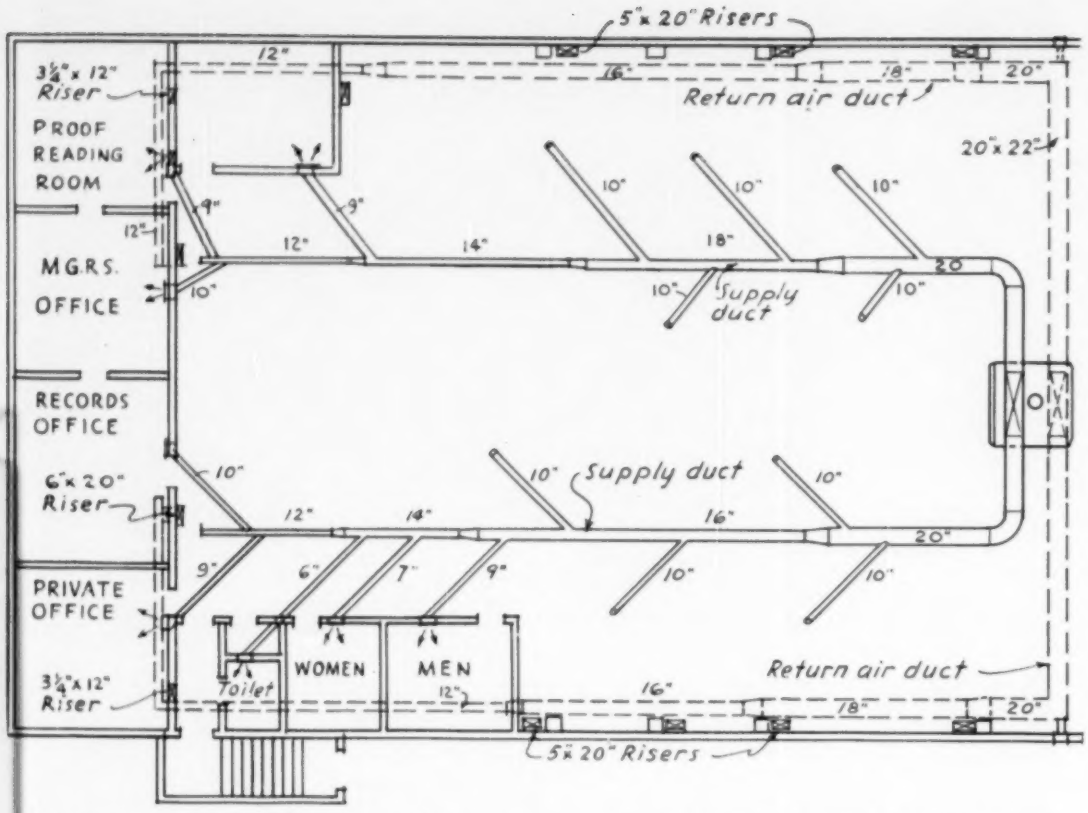


Suspended Installation In Printing Plant Conserves Valuable Floor Space

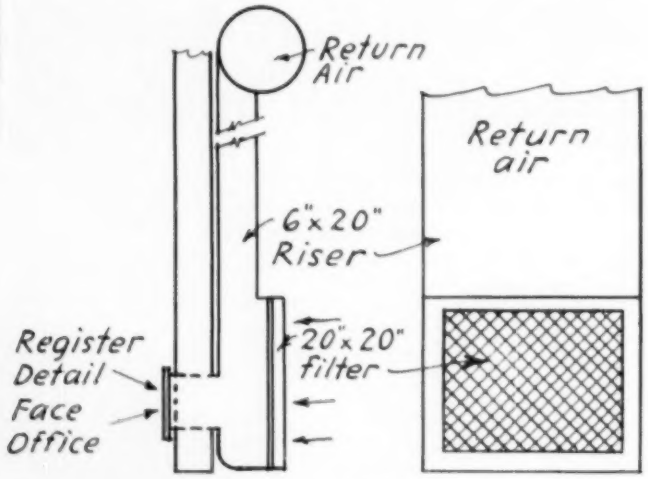
Industrial plants usually regard usable floor space as a valuable asset and when a heating contractor shows how he can install an efficient heating plant without cutting floor area the sale is nearly made. The units pictured above supply almost three quarter million Btu per hour.

WARM air heating contractors today are experiencing an expansion of the normally accepted market for winter air conditioning systems. Design and engineering have transformed the hand fired gravity furnaces of two decades ago into compact, integral, efficient heat generators which are capable of distributing circulated warm air in structures many times larger than the limitation formerly imposed by gravity systems. Increased capacity of heat generators and the mechanical energy of blowers have broadened the warm air heating market, which was considered several decades ago as restricted to the residential and small commercial-industrial fields.

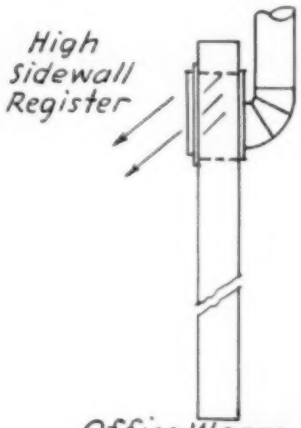
Widespread postwar interest in construction has concentrated much attention on methods of heating the postwar house, the industrial plant, and the commer-



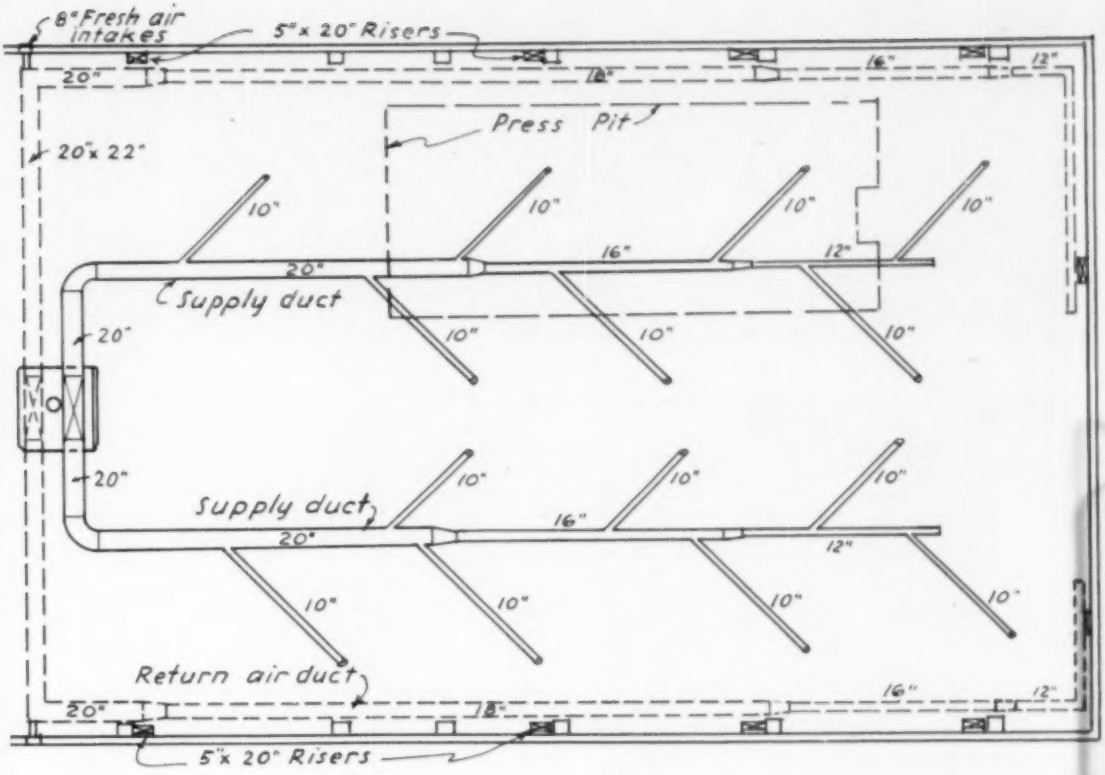
cial establishment. New methods have been sought and tried. But correctly engineered and adjusted warm air heating continues to hold favor among home-owners. And because this method of heating provides the comfort, flexibility, ventilation, and economy that is so essential in commercial-industrial applications,



Return Air Riser Detail



Office Warm Air Detail



acceptance in a broadening winter air conditioning market is now apparent.

The versatility of forced air heating in a broad range of applications is now being experienced by heating contractors who apply principles of sound engineering and seek engineering counsel to insure satisfactory performance. Armand C. and Rheo R. Riopelle, operating as Riopelle Bros., warm air heating and sheet metal contractors at Dixon, Illinois, have observed the expansion of their local warm air heating market and the increasing interest of architects and builders in winter air conditioning for schools, churches, apartments, and commercial-industrial buildings.

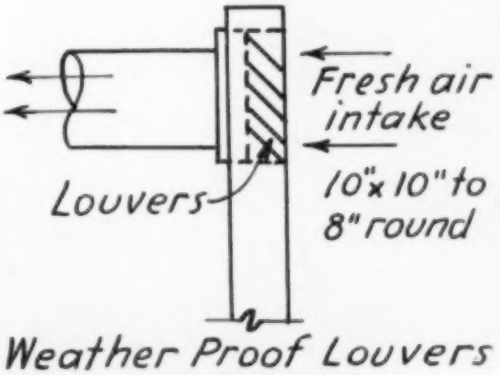
Large Contract Obtained

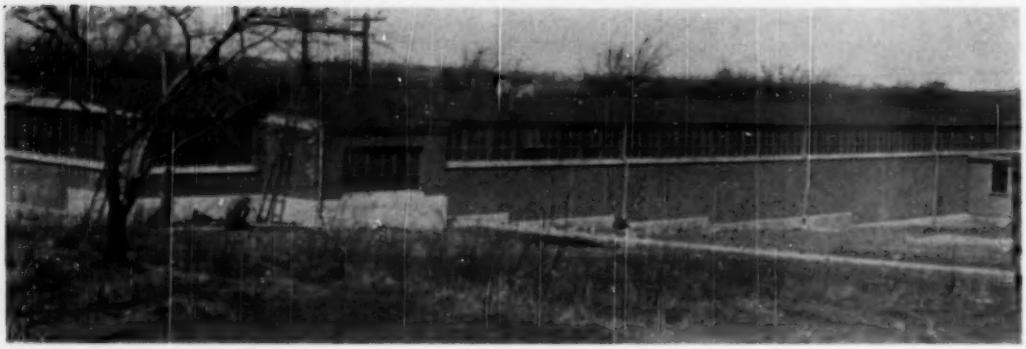
This organization, new to Dixon in 1946 but qualified in heating experience, felt the impact of increasing acceptance of winter air conditioning in commercial-industrial buildings in its first year of operation, when it received a contract to install a gas fired winter air conditioning system in the new printing plant of the Dixon Publishing Company. With the counsel of the Engineering Department of the Meyer Furnace Company, a system suitable for the needs of the printing plant, consisting of offices, typesetting machines and presses, and paper storage space, was designed for the 64 ft by 200 ft, one story, hollow tile structure.

Calculated heat loss of the building, including 1,800 cfm of fresh air, totals 630,000 Btu. Two gas fired units rated at 345,000 Btu each, totalling 690,000 Btu, were installed to supply the heat load.

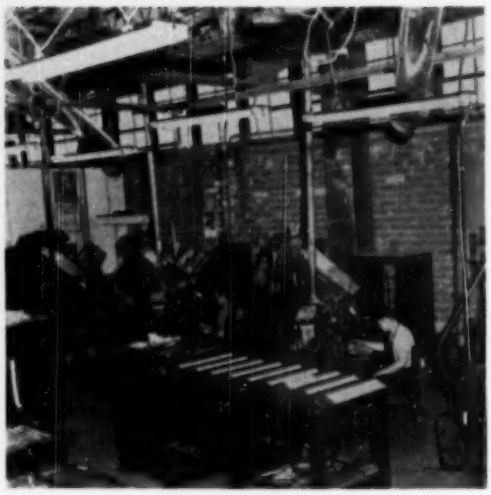
Two Suspended Units

Both heating units are centrally located as indicated in the heating layout. To conserve space, the two furnaces were mounted on a platform suspended from the steel roof trusses, indicative of the versatility of winter air conditioning in such applications. The platform itself is of wood construction, consisting of joists and flooring, covered with non-combustible asbestos-cement





Exterior view of plant.



Overhead supply pipes at linotype.

Return air duct at floor level, with filter.

sheeting. Two 8 in. steel I-beams below the joists support the platform, t' ° beams, in turn, being suspended by steel columns fastened to the steel roof trusses above, as illustrated.

Each unit supplies approximately 5,000 cfm which includes 900 cfm of fresh air per unit, the latter being supplied at a rate of 7.5 cfm per person. Thus, ventilation accounts for

$$1800 \times 60 \times .24 \times .075 \times 80 = 144{,}000 \text{ Btu}$$

where

80 = Design temperature difference, 70 — (—10) F.

The overhead supply system consists of four mains as shown on the heating layout, two from each heater, and each heater supplies the front and rear areas respectively. The front area contains offices and printing machinery while the rear is largely assigned to storage of paper stock which must enter the presses at normal room temperature and humidity.

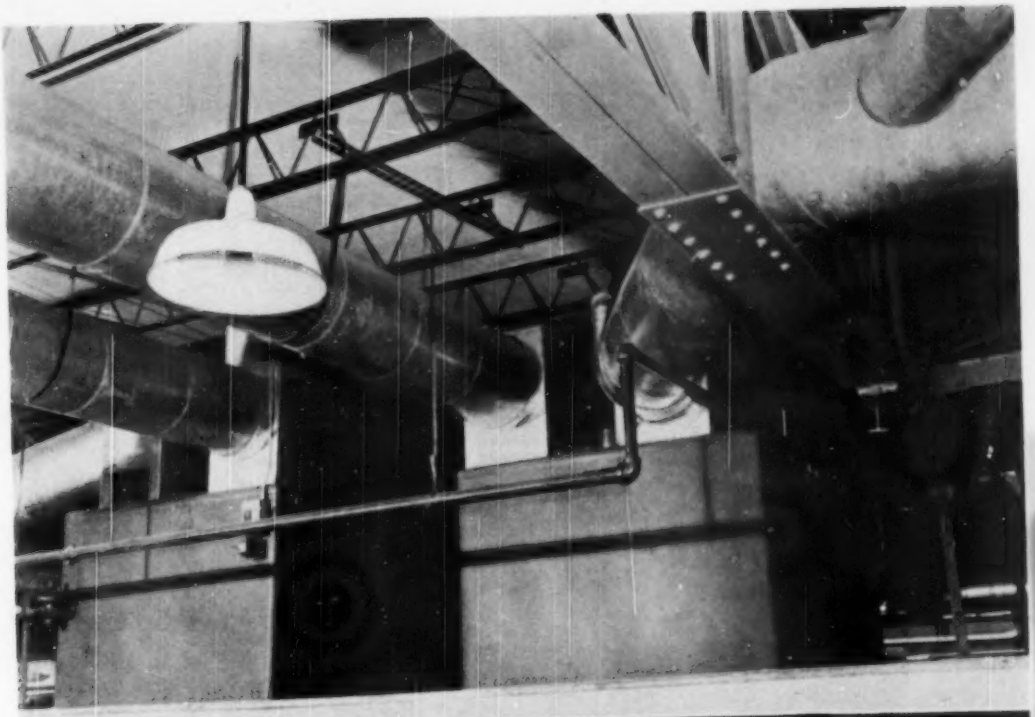
The return and fresh air system is installed overhead in a similar manner, except that the individual intakes extend down the outside walls to the floor where each opening is provided with a replaceable filter. Fresh air intakes are equipped with weatherproof louvers.

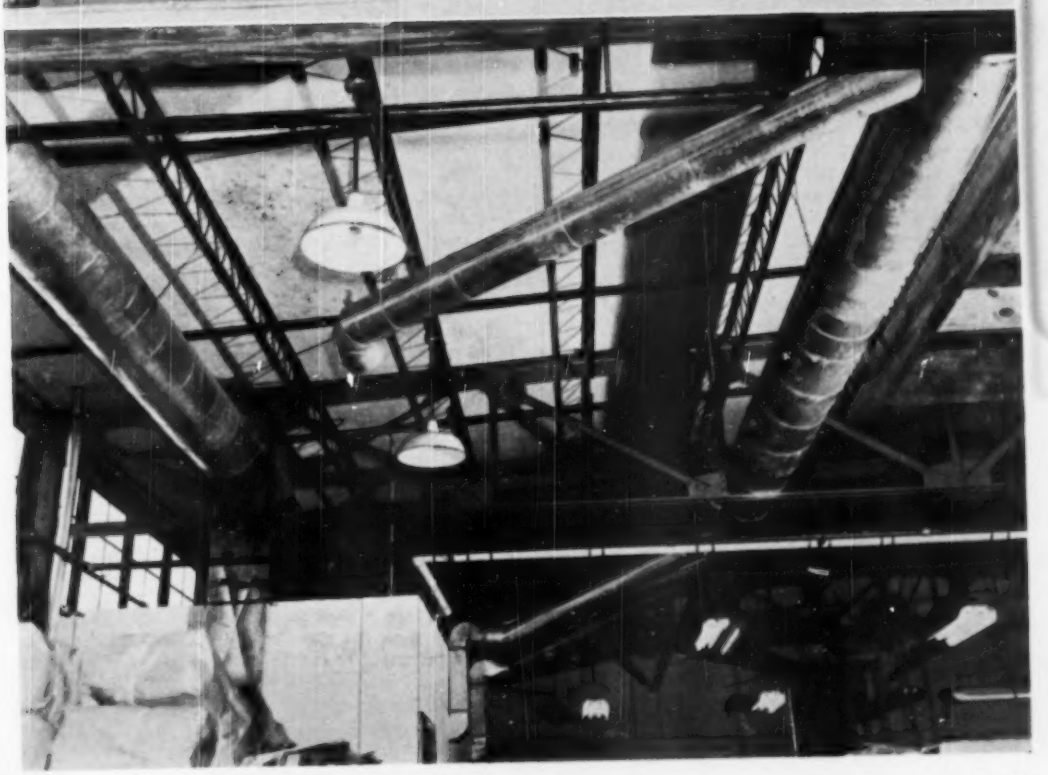
The use of two furnaces establishes two zones of temperature and humidity control, each for its respective area. A specially shaped evaporative humidifying pan in each unit is controlled by a float valve, solenoid, and humidistat.

Industrial Applications Increase

Widespread public acceptance of warm air heating in the residential field has already paved the way for acceptance of similar commercial-industrial applications. Cultivation of this market opens new business opportunities to warm air heating and sheet metal contractors in increased sales volume and stabilized employment of personnel. Unit sales of commercial-industrial winter air conditioning systems are many times greater than in the residential field and offer backlogs of work that spread employment from season to season.

Above, method of suspending heating units is shown. Below, part of the overhead piping system is pictured. Offices at back.





High Velocity Piping System Features Low Velocity Discharge

High velocity of air in the system is reduced by aspirating room air through an intake grille to combine with supply air. Effect is a reduction in velocity and temperature that allows discharge air to enter room within comfortable limits.

HIGH velocity, high temperature supply air has been combined with a new air blending unit to make up a packaged warm air heating system. The new system is the result of 10 years of research and development in providing a pre-engineered, packaged heating system. A minimum of tools and equipment is required to complete installation.

Three basic parts comprise the system: a streamlined, air-tight furnace; specially designed factory made supply ducts; and a series of blending units in which heated air from the furnace is mixed with air induced from the room.

Small Pipes Used

Supply air travels through small, 3½ in. diameter ducts at temperatures ranging up to 195 F and a velocity of 1100 fpm. Entering the blending unit this high temperature air passes through a nozzle. Velocity of the air leaving the nozzle causes room air to be drawn into the intake grille, this high temperature supply air and room air are thoroughly mixed and then discharged at a temperature of 135 F and velocity of 300 fpm. Each supply line will deliver up to 10,000 Btu's per hour.

Single Return Air Duct

Since the blender units recirculate room air, it is usually necessary to provide only one return air duct in a system. Continuous circulation of air assures evenly heated rooms and banishes air stratification. Tests of some systems installed and operating have shown a ceiling to floor differential as low as 3 F.

Design of this new heating system has been planned to make it possible to install it in older homes as well as in new construction. For this reason there are three types of blending units available. The first is a telescoping model that was developed for new construction. It fits between wall studs and when the wall surface is applied the blender is concealed and only intake and discharge grilles are visible. This unit can be adjusted in height from 48 in. to 86 in.

A second unit is only 28 in. high and can be recessed into a wall.

No Wall Cutting

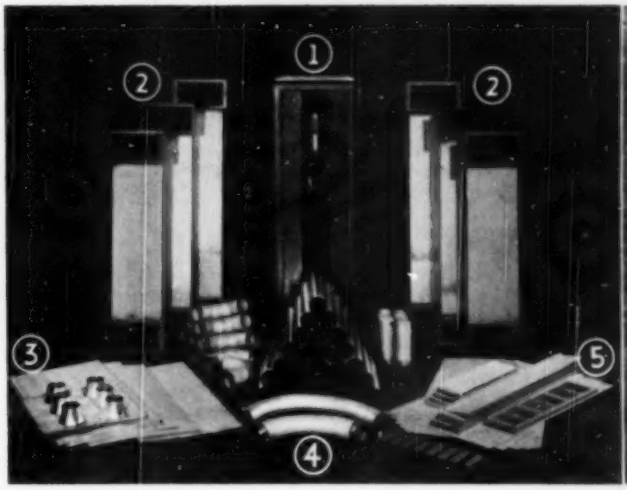
For existing homes a third blending unit has been devised which eliminates need for cutting any walls during the process of installation. It is an all-metal cabinet 32 in. in height which can be set against the wall.

Blender units can be adjusted to control volume of air entering the room by means of a damper in the inlet nozzle. A knob permits the occupant to manipulate this damper to increase or decrease the supply air volume. It is claimed that such adjustments will not unbalance the system. Automatic temperature controls are used with the system to assure *Indoor Comfort*.

Installation Is Simple

Simplicity of assembly and installation reduce installation labor required. The 3½ in. supply ducts are available in convenient lengths which fasten together with simple clamps. Pre-engineered elbows and flexible metal tubing take the runs around corners and construction obstacles. Return ducts and furnace plenum chamber are packed in flat cartons; may be quickly assembled on the site. Special take-off fittings speed the attachment of supply ducts to the plenum chamber. A single experienced workman has been able to complete installation of one of these systems in one 8 hr work day.

Field testing of the new system started in 1947 and



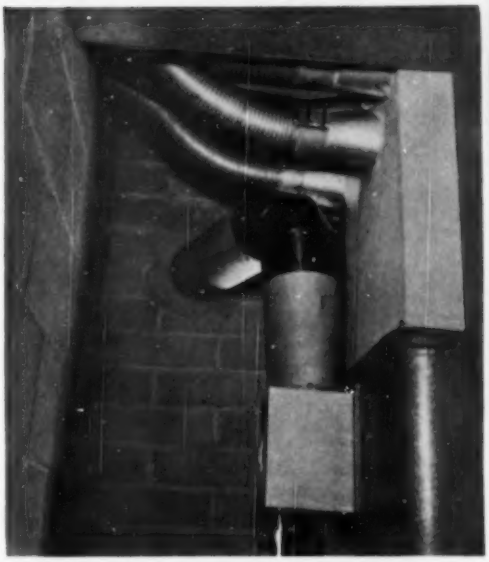
Above, left can be seen the various components of the heating system. No. 1 is the furnace; 2, the blenders; 3, bonnet and connectors; 4, warm air supply pipes and flexible elbows; and 5, return air system, shipped knocked down.

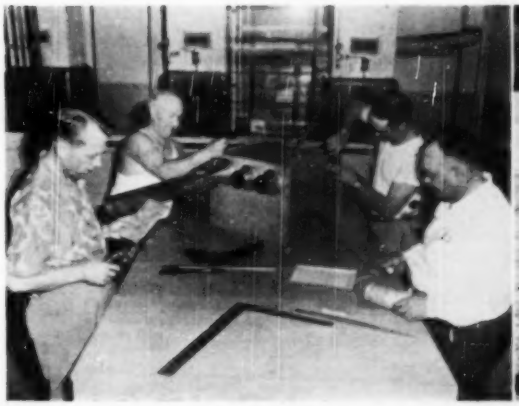
Above, right is an installation showing the small amount of space occupied by the piping for this system.

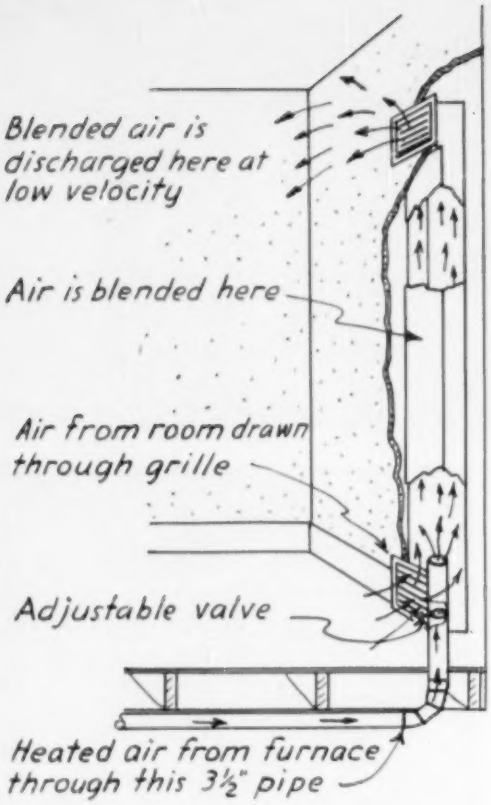
Right, The flexible sections make it possible to run supply pipes through very small spaces.

Below, left is a scene at the school for contractors maintained by the company. Only a few simple tools are needed for installation.

Below, right is an entire heating plant loaded on a light pickup truck.







and since that time a number of other experimental jobs have been installed, including one at the U. S. Bureau of Standards in Washington, D. C. Descriptions of some of the test houses are shown with this article and results of one particular test in each house are quoted. These installations are in varying climates and locations.

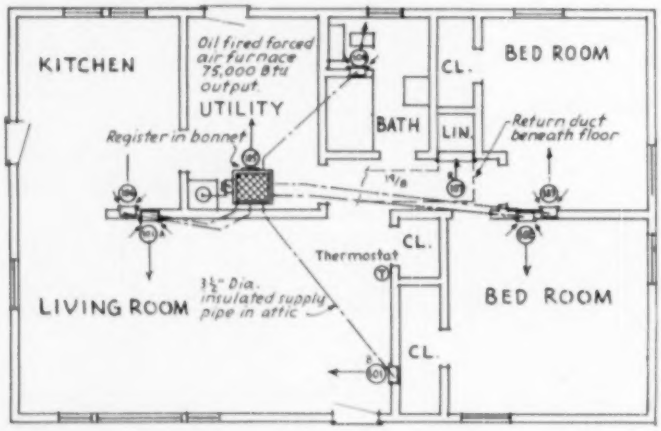
Old House Work

The adaptability of this development to old house work is significant. Many contractors specialize in modernizing heating plants in old houses and this system will reduce need for wall cutting and structural changes. One blending unit was designed specifically for old house installations and is very simple to apply.

As already indicated, the manufacturer supplies all component parts of the heating system and the worker who installs it needs only a few simple hand tools. Standardization of parts and flexibility of the supply system solve many problems that ordinarily require time and application of unusual fittings. The small ducts fit into spaces which cannot be utilized when applying a conventional system.

Installation is Flexible

Applications of this heating system to various house designs seem to be feasible, according to early reports. When the house is designed with a basement, the furnace is located there and ducts and blenders are installed in conventional fashion. If the house is of basementless construction, the furnace is located in a utility room and supply ducts are run through the attic to a blender which is reversed in operation. In this case supply air enters from the top, drawing air



The system shown here was planned for a speculative builder in Chicago. It proved quite successful

Schedule

Room	Supply Run No.	Blender Type	Blender Supply
Living	101A 101B	Concealed	Lo-wall
Front BR	102		
Rear BR	103		
Bath	104	Concealed	Lo-wall
Utility	105	12 by 4 in.	on bonnet
Kitchen	106	Concealed	Lo-wall

Return

Room	Run No.	Grille Size	Grille Location
Hall	R107	30 by 6 in.	Baseboard

Notes

1. Heat loss calculated to be 59,310 Btuh based on heating the house to 70 F when the outside temperature is —10 F. Building construction details: Outside wall frame with 1 in. blanket insulation U .15; ceiling with 2 in. of insulation, U .12; Single glass windows, weatherstripped.
2. Wall type blenders are 12 in. wide and 3½ in. thick with 12 by 6 in. grilles.
3. Locate top grille 6' 8" above floor.
4. This installation must conform with local codes.

TEST RESULTS

Job location	Wichita (1947)	Cleveland (suburb)	Detroit	Denver—Lookout Mt.
Age of house	41 years	8 years	8 years	50-60 years
Owner	Russell Kice	Robert Brinker	DeRoy Adair	Robert Schell
Occupation	Sheet metal worker	Mechanical engineer	Salesman	Salesman
No. in family	5 (baby 8 mo.)	4 (baby 14 mo.)	8	4
No. of rooms	6 & bath	6 & 2 bath	5 & bath	8 & bath
No. of floors	1 (no basement)	2 (full basement)	2 (full basement)	2 (no basement)
Heat loss	78,000 Btu	64,000 Btu	61,000 Btu	83,000 Btu
Winter design temp.	—5 F	—10 F	—10 F	—10 F
Furnace used	Special gas	Model 92 oil	Model 92 oil	Model 92 oil
Furnace location	Old pantry	Basement	Basement	Utility room
No. of blenders	9	9	8	11
Type blenders used	Concealed & cab.	Cab. & concealed	Cab. & concealed	Concealed
Date of test	2/28/48	12/11/48	1/14/49	2/6/49
Test outside temp.	7 F	34 F-snow on ground	32 F-sleeting	29 F
Thermostat setting	74 F	74 F	74 F	72 F

Data from test

Room	*2"*	*30"*	*94"*
LR	72	74	77
DR	72	74	76
K	71	73	74
B	73	75	77
BR	71	73	75
BR	71	72	75
SP	71	72	73

Room	*2"*	*30"*	*94"*
LR	72	74	76
K	73	75	77
BR	72	73	74
BR	73	74	75
B	76	76	78
BSMT	68	70	72

Note: New BR and Bath in attic not complete.

Room	*2"*	*30"*	*94"*
LR	74	74	77
K	74	74	77
BR	73	74	76
BR	72	73	75
B	76	76	78
BSMT	70	73	74
Attic	72	72	75

Room	*2"*	*30"*	*94"*
LR	70	73	75
DR	69	72	75
K	69	72	75
U	72	76	80
B	74	76	78
BR	70	71	74
BR	70	71	75
BR	70	72	74
BR	71	73	75

Comments:

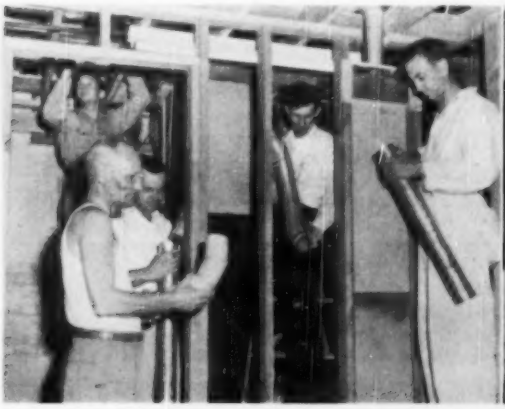
First installation. Used 20 to 50 per cent outside air to counteract infiltration. Used reverse flow units in sleeping porch & kitchen with good results.

These two houses were very similar in size, construction, and age. Results were nearly identical—both very good. Owners are very enthusiastic. Mr. Brinker objected to noise due to vibration in one blender valve—corrected by new nozzle assembly. Mrs. Brinker happy about space saved in basement. Mrs. Adair pleased with new recreation room for children.

Good distribution. Furnace slightly under capacity. Construction of this house made it impossible to install any other type of system except expensive forced hot water at double the cost.

from the ceiling area of the room and discharging it at floor level. Continuous circulation of air prevents drafts and discharge of warm air at the floor level provides warm floors throughout the house. When installation is made in this way ducts are insulated wherever they travel through unheated attic space.

Further tests and installations will give a clearer picture of performance characteristics of this system, but, for the present, it is a new development in warm air heating that will bear observation.



Scenes at a school for installers.

Warm Air Furnace Production - Distributed by Type of Air Circulation
1930-1948

Year	Winter air conditioning: Number of units	Winter air conditioning: Percent of total	Gravity flow: Number of units	Gravity flow: Percent of total	Total, all types: Number of units	Total, all types: Percent of total
1930	10,000	3	290,000	97	300,000	100
1931	10,000	5	197,000	95	207,000	100
1932	15,000	8	185,000	92	200,000	100
1933	30,000	16	160,000	84	190,000	100
1934	40,000	23	135,000	77	175,000	100
1935	70,000	33	141,000	67	211,000	100
1936	90,000	38	150,000	62	240,000	100
1937	125,000	32	267,000	68	392,000	100
1938	130,000	37	220,000	63	350,000	100
1939	150,000	34	289,000	66	439,000	100
1940	180,000	34	351,000	66	531,000	100
1941	181,760	32	386,240	68	568,000	100
1942	70,250	25	210,750	75	281,000	100
1943	23,760	12	174,240	88	198,000	100
1944	26,460	9	267,540	91	294,000	100
1945	71,540	20	293,460	80	365,000	100
1946	245,688	35	460,312	65	706,000	100
1947	476,211	54	400,789	46	877,000	100
1948	401,709	52	375,291	48	777,000	100

Fig. 1

Profit Possibilities In Package Blowers

Furnace production figures indicate that the market for gravity warm air furnaces is still flourishing. That fact means that the market for package blowers will continue.

PACKAGE BLOWER UNITS offer *Indoor Comfort* dealers the key to a large, profitable market that has not been fully exploited. Now, more than ever, the owner of a home heated by a gravity warm air heating system is conscious of the benefits of winter air conditioning. Millions of these gravity heating jobs can be converted to winter air conditioning systems by the addition of a package blower. These prospects are just waiting to be sold.

Value of Market

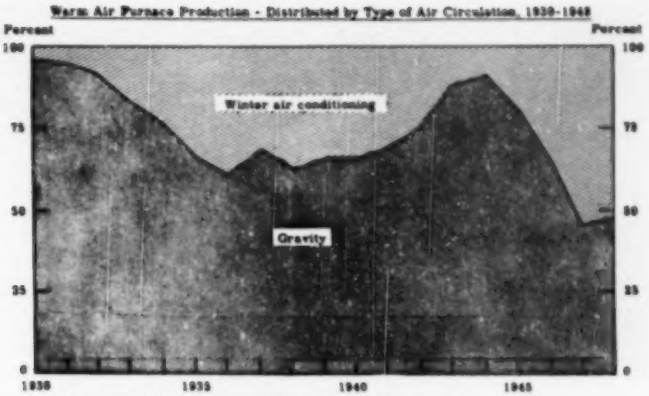
Here are some significant factors that indicate the value of the market and the scope of its sales potential:

1. Trend in new installations is toward even greater use of winter air conditioning, proving the acceptance of its superiority.
2. Volume of package blower sales in relation to potential market is still low, although it has been increasing steadily since the war.
3. Alert dealers have proven the saleability of package blowers.

Business Opportunity

These factors indicate that a good business opportunity awaits the heating contractor who promotes this product and aggressively develops the market in his territory.

A large and continuing market exists for package blowers. It is made up of millions of homes which are today heated by gravity heat-



NOTE: FIGURES FOR THE YEARS 1930-1940 ARE ESTIMATED.
DISTRIBUTION FOR YEARS 1941-44 BASED ON "ORDERS BOOKED" DATA.
1948 FIGURES ARE BASED ON SHIPMENTS.
SOURCE: BUREAU OF THE CENSUS.

Fig. 2

ing systems. Owners of these homes can be convinced of the advantages of adding a blower to their heating plant. They will not waylay the heating contractor and force him to sell them his product, however. They may be willing to buy but he will still have to ask them.

Some statistics on the scope of the undeveloped market would be appropriate at this point.

Warm Air Systems

At the end of the war, in 1945, it was estimated that there were 9 million warm air systems in use in the United States. Of that number, 5 million had been installed since 1930, and 1.7 million in the last five years.

The recently-installed furnaces make up a prime group of prospects for the addition of a package blower. Since the average life of a gravity furnace is approximately 15 years, these furnaces have considerable useful life remaining. It would be uneconomical for the homeowner to write off this investment and buy a complete new unit. The package blower is the ideal way to convert these systems to winter air conditioning.

Gravity Furnaces

Reference to Fig. 1 will show the number of installations of gravity furnaces in the past 18 years. A significant fact is that an average of 410,000 gravity furnaces has been installed for the last 3 years. In other words, more gravity furnaces are now being installed each year than forced warm air and gravity furnaces years ago.

Perhaps the main reason for this continuing market is the low installation cost of the gravity furnace. In 1948, 375,000 gravity warm air systems were installed compared with 402,000 winter air conditioning units. It is a recognized fact that many homes can be efficiently heated by gravity and that no change need be made in the system. However, many thousands of homeowners have installed gravity heating plants with the definite intention of converting to winter air conditioning at a later date.

Speculative building contractors have installed gravity heating systems in many of their homes because of low first cost. Perhaps the purchaser of such a house is convinced he should have winter air conditioning, but is hesitant to have a new heating plant torn out to be replaced by a more advanced system. In such an instance, the perfect answer is the package blower unit because the main system will be retained and the advantages of forced circulation added.

Blower Benefits

As consumers become more aware of the benefits of *Indoor Comfort* they will more easily be sold on the merits of adding a blower to their gravity furnace. There will probably always be a market for gravity furnaces and so, too, a market for package blowers.

What are some other indications that the dealer who overlooks the package blower market is missing easy extra profits and a chance to build greater seasonal stability? The attitude of homeowners toward winter air conditioning is making blowers a more saleable item every

day. Gravity furnace owners, through publicity, advertising, word of mouth, contact with friends, etc., are learning more about what they are missing by not having winter air conditioning. Main obstacle in their path is often the fact that their present unit has years of good service remaining and it would be extravagant to discard it. Obvious answer to this problem is a package blower.

The Answer

Trend toward winter air conditioning is indicated by Fig. 2. This graph shows a huge statistical market for package blowers, based on the premise that a large percentage of gravity furnace owners are firmly enough convinced of the advantages of winter air conditioning to take positive action.

Someone has defined a market as a group of people with the ability and inclination to buy. It stands to reason that no matter how many gravity furnaces are in use, there is no real market for package blowers unless they provide additional advantages that the homeowner recognizes and wants. There's no future in selling refrigerators to Eskimos, no matter what the humorists say. And there would be no point to the dealer attempting to high-pressure the prospect into buying a blower if it did not provide real benefits.

One question that practically every dealer has in his mind is, "Why should I try to sell a prospect a package blower instead of a complete new winter air conditioning system? The complete job is a bigger sale and means more profit."

The answer depends largely on the condition of the buyer's present system. These are facts a dealer should consider in deciding what type of equipment to put the most sales effort behind:

Consider Factors

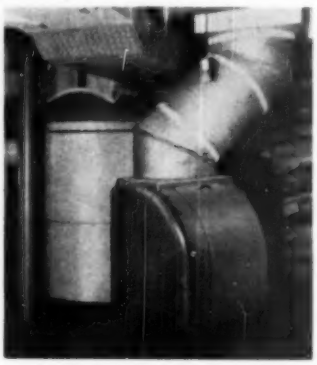
1. Age and condition of the furnace. A furnace 3, 5, or 10 years old is usually far from worn out. In such cases it is neither economically sound nor in keeping with good ethics to push the sale of a new unit. A blower attached to the furnace will give the same advantages of comfort, convenience and fuel savings.
2. Investment in present unit. If the homeowner has recently converted from hand firing to automatic heat, he has put a considerable sum of money into his present system. He would not be happy about junking it and again a blower is the proper answer.

Not every gravity furnace owner, even where the furnace is relatively new, is or should be a prospect for a package blower. In a great many cases a well-designed gravity installation furnishes perfect satisfaction. In a small home where the furnace is centrally located and there are no long runs, a gravity system will do an excellent job. However, any experienced heating contractor can distinguish between cases where gravity heating is adequate and where forced air would be advisable. It is likely a majority of heating plants can be improved by the addition of a blower.

Gravity Can Do It

Perhaps it is elementary to review the shortcomings inherent in a gravity warm air system and the good points that winter air conditioning offers. But a brief recap does help to illustrate the sales ad-

(Please turn to page 250)



Warm Air Heats Large Buildings

ONE of the most interesting trends in the field of warm air heating has been the recent expansion of the use of this type of heating in large commercial and industrial buildings. From the very earliest days of the use of fans or blowers to move heated air, over twenty years ago, there were large homes that incorporated this heating medium. The growth of applications of warm air to such structures as factories, bowling alleys, airplane hangars, super-markets and similar large stores has been gradual.

Basic Advantages

Factors which have contributed to this acceptance of warm air heating for large projects are the flexibility of operation it offers, ease of installation and in many cases, an actual dollars and cents saving in installed price. An effective argument in this regard has been used by one manufacturer who states that all heating systems end by warming the air, why not start that way.

This, in essence, is the basic advantage of warm air heating. It circulates the air so that an even temperature is obtained in all parts of a structure and makes possible the use of filters which will keep the air clean of suspended dust and dirt particles. It also lends itself to application of germ destroying lamps which will rid the controlled atmosphere of virtually all bacteria. The result of this air cleansing is to make the occupied space a much healthier place in which to work. It is possible that the installation of a warm air heating system could even improve labor relations.

Another phase of warm air heating is the fact that a system for warming the air is easily adapted to cooling the air for summer comfort. In retail sales establishments this is becoming one of the most important points in business operation.

The need for a comfortable shopping atmosphere has been fully recognized by one large retailer of clothing for men, women and children. This organization operates stores throughout the nation and has based its merchandising on the construction of factory salesrooms located away from the expensive shopping districts. These salesrooms are very plain and the clothes are displayed on pipe racks which offer utility but not glamour. Officials of Robert Hall feel that they are able to offer better values to the shoppers who come into their stores because of the curtailed overhead and lack of elaborate furnishings.

In spite of the plain surroundings these salesrooms are very comfortable places to shop because of the installation of a combination heating and ventilating system that can later be adapted for summer cooling.

Floors Kept Warm

A standard one story design has been developed for these salesrooms and floors are of concrete that is directly on grade. The heating system has been arranged to keep a uniform distribution of warm air in the occupied zone and any tendency toward cold floors is thus overcome. Each building is 100 by 150 ft in floor area and one direct, oil fired heater is used for each unit. As can be seen in the illustration return air grilles are located at the back wall where air is drawn into the heater room from the salesroom. The air is warmed and filtered and then discharged back into

At the left can be seen the return air grilles located between the heater room and the salesroom of the clothing stores. Ceiling diffusers are visible at right.

Application of a direct fired warm air heater unit has solved many problems of maintaining steel in prime condition.

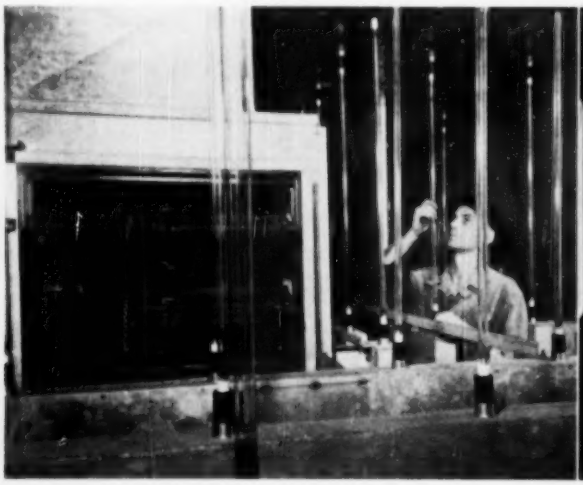
the salesroom. During the summer months the heaters are operated as ventilators. An overhead supply system is used in these installations with circular air diffusers located in the ceiling.

This same type of direct fired heater has found utility in other applications such as the steel warehouse pictured. Proper control of the air in the warehouse eliminates some problems that were formerly encountered in keeping steel in prime condition prior to shipment.

In the field of air cleaning and bacteria control, two installations are pictured that have been developed in recent years. The activated carbon air recovery panels used in railroad equipment have made possible the maintenance of a fresher atmosphere in the passenger cars with a reduced strain on the ventilating equipment. These panels allow the use of a greater percentage of return air—the result is that total fresh air in the car is doubled and odors are banished.

The germ destroying lamps shown have been installed in some very large buildings where traffic is quite high during the day and the overall effect has been beneficial. Communication of disease by airborne bacteria is almost eliminated by use of such lamps since they are 99 per cent efficient in destroying germs.

Advantages of flexibility, responsiveness to controls, air movement and cleaning efficiency and economy of installation and operation make the selection of warm air heating a sound decision. Contractors who handle such jobs are finding an increasing acceptance on the part of building contractors and heating engineers to the idea of heating large buildings with warm air.



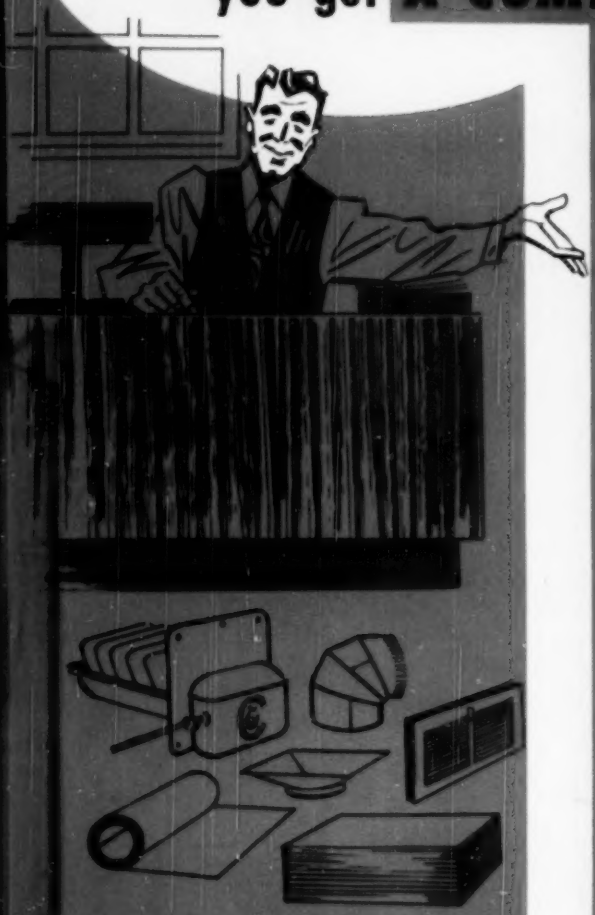
At the left is a large installation of germicidal lamps in a western office building. An air volume of 30,000 cfm is treated. On the right an activated carbon air recovery panel is being changed.

ALL OF CHAR-GALE'S FACILITIES

are Devoted to just one thing...

MORE and BETTER SERVICE to CHAR-GALE'S CUSTOMERS

from your CHAR-GALE fitting manufacturer you get A COMPLETE LINE



BUYING AT THE BEST ADVANTAGE

That's another thing. Buying a complete line means *extra saving* and *extra profit* through lower unit cost. I order mixed truckloads. That way I get the truckload discount on each and every item making up that truckload. Think of it. Less storage . . . increased dollar efficiency through smaller inventories. No LCL rates or over-sized inventories for me!

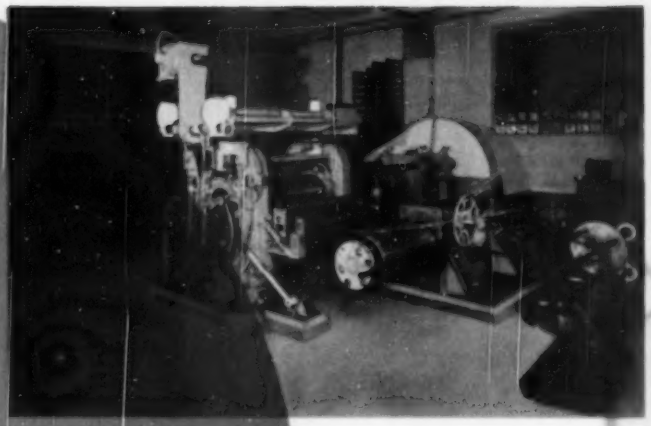
- ✔ Galvanized Sheets
- ✔ Galvanized Smoke Pipe and Elbows
- ✔ Galvanized Furnace Fittings
- ✔ Aluminum Sheets and Coils
- ✔ Aluminum Pipe and Elbows
- ✔ Aluminum Furnace Fittings
- ✔ Registers and Grills
- ✔ Humidifiers
- ✔ CHAR-GALE super Blue stove pipe, Elbows and Stove Pipe Fittings

CHAR-GALE ALUMINUM

SHEETS and COILS

IMMEDIATE DELIVERY

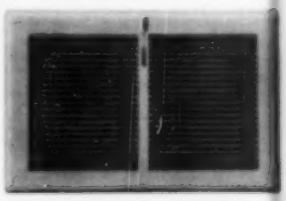
This large capacity Reduction Rolling Mill in operation at our Minneapolis plant #1 assures immediate delivery on sheets and coils . . . another of Char-Gale's improvements for their customers.



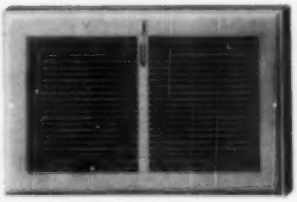
REGISTERS

Forced Air Models

Pleasing to the eye—modern in functional design—these are improved registers, built to reflect the quality of the heating system.

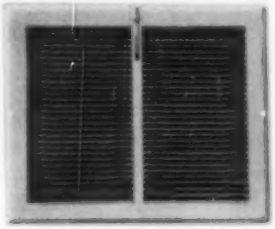


The free area is equal to, or exceeds that of all other close-space registers. Modern production methods bring this higher quality register within the price range of the average home.

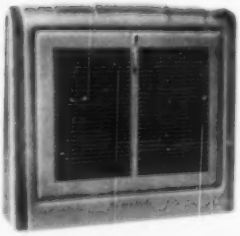


Gravity Models

For the home with the gravity type heating plant, these registers are comparable in appearance and efficiency to the Forced Air type.

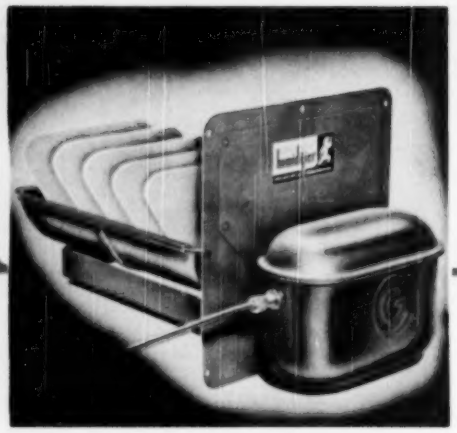


BASEBOARD REGISTER is two-piece with removable face. New modern design with downward flow for more efficient heating. Ample free area assures perfect operation. SIDEWALL WAFER TYPE embodies same principle.



ALSO STEEL FACE AND FLOOR REGISTERS

The NEW CHAR-GALE Humidifier

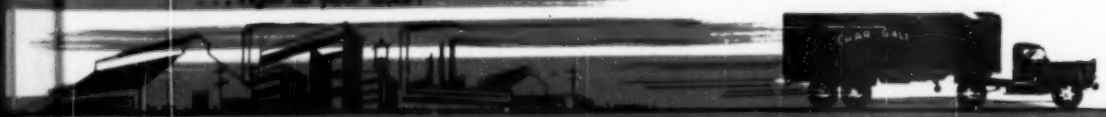


In this humidifier you will find all the features you have been looking for . . . designed not only for exacting performance, but for long duty without replacement or repair . . . *all at a lower cost than the average humidifier.*

1. Snap-action valve for anti-clogging pressure flow.
2. Scientific Activapor Plates for more vapor output.
3. A simple pan-level control to fix water level at any desired depth.
4. Adjustment slide to attain perfect level on any installation.
5. Corrosion-resistant throughout to assure long-life.
6. Shipped pre-assembled to reduce installation labor and time.

FAST DIRECT DELIVERY

By ordering a mixed truckload of Char-Gale's complete line, you save on shipping costs—and you keep your inventory *down*. You get the truckload discount on each and every item. And you get fast delivery in flawless condition . . . right to your door!



KEEP YOUR EYES ON CHAR-GALE

We at Char-Gale, from the first, have resolved to devote all our efforts, and our facilities, to just one thing—more and better service to our customers. We feel that our progress in the past, and our plans for the future, demonstrate our determination to uphold the Char-Gale tradition.

CHAR-GALE MANUFACTURING CO.

MINNEAPOLIS OMAHA

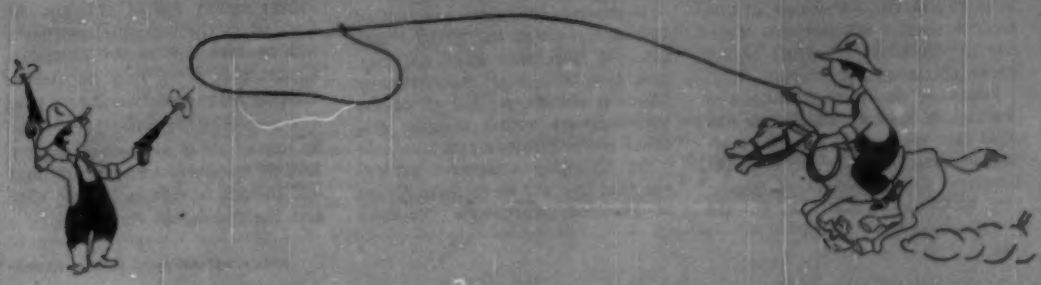
Southwest Air Conditioning Exposition

. . . 56th Annual Meeting of the American

Society of Heating and Ventilating Engineers

SHOW SECTION

DALLAS - January 23-27



The ASHVE Texas Special heads for Dallas for the 56th annual meeting and the Southwest Air Conditioning Exposition

BIG WEEK IN DALLAS

SOLAR HEATING, heat pumps, night cooling, physiological reactions to environment, radiant heating—these are some of the technical subjects to be discussed at the 56th annual meeting of the American Society of Heating and Ventilating Engineers in Dallas this month.

Five technical sessions will include the presentation of 12 papers by outstanding scientists and engineers. During the first technical session—Monday morning, January 23, at the Baker Hotel—amendment of the society by-laws will be considered by the membership. On the same day, at 2:00 p.m., the Southwest Air Conditioning Exposition will open its doors at the Hall of Agriculture and the Poultry Building in the State Fair Park. Regular bus service from the downtown hotels will be provided.

The scheduled events (see program) will be held in the Hotel Adolphus and the Baker Hotel. While the technical sessions are going on, wives and guests of ASHVE members may participate in the special events scheduled for the ladies. At 2:30 p.m., Sunday, January 22, there will be a ladies' get-together in the Texas room of the Baker. On Tuesday, January 24, in the Mural room of the Baker, there will be a luncheon and style show at 12:30 p.m. On Wednesday, at 1:45 p.m., the ladies will attend a matinee in "Theater '50" when Margo Jones presents "My Granny Van".

Following tradition, the climax of the annual meeting will be the annual banquet at 7:00 p.m. Wednesday evening, January 25, with Dr. Umphrey Lee, president of Southern Methodist University, as the speaker. Presentation of the F. Paul Anderson medal will be made to Dr. C.-E. A. Winslow, New Haven, Conn., who is a past president of the society, editor of the American Journal of Public Health, and professor emeritus of public health at the Yale University school of medicine. Following the banquet there will be dancing.

At the welcome luncheon on Monday, January 23, the speaker will be Jeff Williams, the "Oklahoma Cowboy", who will give an informal talk. The speaker at the luncheon meeting on Tuesday, January 24, will be K. C. Richmond, Chicago, editor of Coal-Heat magazine and an ASHVE member. Mr. Richmond will speak on "the meaning of the human equation" in heating and air conditioning.

On the last day of the four-day meeting, newly elected officers will be installed at the final technical session on Thursday. Throughout the meeting, there will be various gatherings of executive officers, the council, the chapter delegates and the many technical advisory committees. Past presidents of the society will hold their traditional dinner Tuesday evening.

Inspection Trips Scheduled

Members and guests are invited to make tours of the Kirby building, the Mercantile Bank building, and the Lone Star Gas building. There is no charge, and all of the buildings are within walking distance of the headquarters hotels.

On Thursday afternoon, an inspection trip will be made to Alford refrigerated warehouse, "world's largest refrigerated space under one roof." Transportation from the Baker and the Adolphus will be furnished.

Each building has its own particular feature. The Lone Star Gas installation will be the largest absorption system in Dallas. The Mercantile Bank is the largest overall system. The Kirby building represents the only office building with a complete boiler plant, refrigeration plant and all equipment machine room on the roof of the building. The Alford warehouse contains 1100 tons of low suction refrigeration; heating of office space is by engine jacket water.

A trip has been planned to the East Texas oil fields, leaving Love Field at noon on Thursday, January 26, flying in either a DC-6 or DC-4 (or both) furnished by Braniff Airways, and arriving in Longview approximately 45 minutes later after circling the oil fields. From this point, bus service will transport the passengers to Kilgore, Longview, Gladewater and surrounding territories, where they will be able to see gas pumping stations, oil wells in operation, gas flares burning the surplus gases, and other interesting sights.

The trip in the buses will take approximately 2½ to 3 hours. At the end of the trip the passengers will be returned to the Longview airport and flown back to Dallas, arriving between 4:30 and 5:00 p.m.

A post-meeting, all-expense tour by rail or air is also scheduled for ASHVE members and friends and will include a visit to Mexico City and the Guadalupe Shrine.

PROGRAM FOR ASHVE MEETING

Sunday—January 22

10:00 a.m. RECEPTION & REGISTRATION (Mezzanine—Baker)

10:00 a.m. Committee on Research (Baker)
Council (Adolphus)

2:30 p.m. Ladies Get-Together (Texas Room—Baker)

4:30 p.m. Chapter Delegates (Adolphus)

Monday—January 23

8:30 a.m. REGISTRATION (Mezzanine—Baker)

9:30 a.m. FIRST SESSION (Ballroom—Baker)
Call to Order
Greetings
Response by Alfred E. Stacey, Jr., President
Reports of Officers and Council
Night-Air Cooling, by F. E. Giesecke
Physiologic Examination of the Effective Temperature Index, by Nathaniel Glickman, Tohru Inouye, R. W. Keeton, M. K. Fahnestock
Amendment of By-Laws

10:30 a.m. Ladies Assembly (Texas Room—Baker)

12:30 p.m. Welcome Luncheon (Ballroom—Adolphus)
Speaker—Jeff Williams

2:00 p.m. Opening of Exposition at State Fair Grounds

2:30 p.m. Chapter Delegates (Adolphus)

7:00 p.m. Chuck Wagon Dinner — Entertainment — Dancing

Tuesday—January 24

9:00 a.m. REGISTRATION (Mezzanine—Baker)

9:30 a.m. TECHNICAL SESSION (Ballroom—Adolphus)
Report of Tellers of Election
Thermodynamic Criteria for Heat Pump Performance, by John F. Sandfort
Evaluating Heat Pump Performance, by F. R. Ellenberger, A. B. Hubbard, W. R. Foote, F. Burggraf, J. J. Martin, Jr.
Condensation on Prefabricated Walls, by E. R. Queer and E. R. McLaughlin

12:30 p.m. Luncheon Meeting (Adolphus)
Speaker—K. C. Richmond, Editor, Coal-Heat Magazine

12:30 p.m. Ladies Luncheon and Style Show (Mural Room—Baker)

2:00 p.m. Chapter Delegates (Adolphus)

6:30 p.m. Past Presidents' Dinner (Adolphus)

Wednesday—January 25

9:00 a.m. REGISTRATION (Mezzanine—Baker)

9:30 a.m. TECHNICAL SESSION (Ballroom—Adolphus)
Solar Heating of Houses by Vertical South Wall Storage Panels, by A. G. H. Dietz and Edward Czapek
Removal of Lighting Loads by Panel Cooling, by Merl Baker
Baseboard Radiation Performance in Occupied Dwellings, by G. S. MacLeod and C. E. Eves

1:45 p.m. Leave Hotel Baker—Ladies Theater Party—Margo Jones presents: My Granny Van

2:00 p.m. TECHNICAL SESSION—(Ballroom—Adolphus)
Report of Committee on Research
Panel Heating Research Report on Experimental Techniques and Results of Heat Flow Within a Concrete Panel and Heat Flow Analysis for Buried Pipes
Effect of Panel Location on Skin and Clothing Surface Temperature, by L. P. Herrington and R. J. Lorenzi

7:00 p.m. ANNUAL BANQUET (Ballroom—Baker)
Speaker—Dr. Umphrey Lee, President, Southern Methodist University

Thursday—January 26

9:00 a.m. REGISTRATION (Mezzanine—Baker)

10:00 a.m. TECHNICAL SESSION (Ballroom—Adolphus)
Resistance Gradients Through Viscous Coated Air Filters, by F. B. Rowley and R. C. Jordan
Fitting Losses for Extended Plenum Forced-Air Systems, by H. H. Korst, N. A. Buckley, S. Konzo, R. W. Roose
Vaneaxial Fan Fundamentals, by Raymond Mancha
Unfinished Business
New Business
Resolutions
Installation of Officers
Adjournment

12:30 p.m. Nominating Committee Luncheon (Adolphus)

12:30 p.m. Council Luncheon (Adolphus)

Committee on Arrangements

C. Rollins Gardner, *General Chairman*

G. A. Linskie, *Vice Chairman*

Honorary Chairmen

F. E. Giesecke Reg F. Taylor

Banquet—M. L. Brown, *Chairman;* J. P. Dillard, J. R. Dowdell, W. E. Frost, E. J. Stern.

Entertainment—R. E. Allison, *Chairman;* A. B. Carter, V. C. Kneese, James O'Connor, Jr., A. A. Stone, J. L. Tye.

Exposition—Oslin Nation, *Chairman;* W. R. Barbeck, S. S. Brandt, N. R. Collins, Jr., F. L. Gray, Jr., R. G. Lyford.

Finance—E. T. Gessell, *Chairman;* J. B. Lowe, J. F. Marshall, R. R. Matthews.

Ladies—T. H. Anspacher, *Chairman;* R. R. Brient, Jr., R. A. Mixon, J. D. Poythress. *Assisted by:* Mmes. T. H. Anspacher, J. P. Ashcraft, W. R. Barbeck, Herman Blum, Jr., M. L. Brown, J. P. Dillard, C. Rollins Gardner, E. T. Gessell, D. C. Kieffer, V. C. Kneese, G. A. Linskie, Oslin Nation, J. A. Ray, P. N. Vinther.

Publicity—J. P. Ashcraft, *Chairman;* D. L. Echols, E. J. Hatzenbuehler.

Reception—W. R. Barbeck, *Chairman;* S. E. Ammons, A. F. Avera, J. A. Bishop, M. W. Brown, H. M. Cunningham, E. E. Farrow, D. W. Harrington, T. M. Jones, R. C. Knight, B. W. Levy, C. H. McLeod, M. J. Murray, H. G. Walcott, K. L. Wilson.

Sessions—P. N. Vinther, *Chairman;* J. W. Lacy, D. C. Pfeiffer, R. A. Walker.

Special Events—Herman Blum, Jr., *Chairman;* R. M. Burgess, Fred Downs, R. A. Mayes, I. P. Newby.

Transportation—J. A. Ray, *Chairman;* C. F. Gilmore, M. O. Tessman, Jr., C. C. Young.

EXPOSITION EXHIBITORS AND THEIR EXHIBITS

Here Are The names of the exhibitors who are scheduled for the Southwest Air Conditioning Exposition of the International Heating & Ventilating Exposition, per latest advice at press time from the exposition management. Those listed with information on the products they will exhibit and the names of representatives who will be in attendance furnished these details direct to the publisher. With the booth numbers and the accompanying diagrams of the exhibit halls on the following pages, the location of each exhibitor can be quickly spotted.

The exposition is under the management of the International Exposition Co., Charles F. Roth, manager, E. K. Stevens, associate manager.

ACME INDUSTRIES, INC., 600-618 N. Mechanic St., Jackson, Mich.—Booth 103.
In attendance: K. A. Weatherwax, A. B. Newton, J. T. Maloney, E. B. Dunphy, Leo J. Freitas, L. W. Lashley, L. S. Pawkett, L. W. Ellis, Ferris Kennedy.
Exhibiting: Evaporative condenser, "Dry-Ex" water cooler, fin coils, cooling tower, oil separators, heat exchangers, "Freon" and ammonia condensers, shell and tube condensers, shell and coil condensers.

AETNA INDUSTRIAL CORP.—see TRI-MONT MFG. CO.

AFFILIATED GAS EQUIPMENT INC., DAY & NIGHT DIV., Monrovia, Calif.—Booth 360 (see also Bryant Heater Div. and Payne Furnace Div.)

AIR DEVICES, INC., 17 E. 42nd St., New York 17, N. Y.—Booth 220.
In attendance: C. N. O'Day, G. J. Sweeney.
Exhibiting: "Agitair" air filters; grease filters; square, rectangular and circular air diffusers; and wind actuated exhausters. New "CNO" exhausters and new dampers for circular, square and rectangular air diffusers will be featured.

AIR-MAZE CORP., 5200 Harvard Ave., Cleveland 5, Ohio—Booth 105.
In attendance: W. B. Watterson, N. L. Lamprecht, C. D. Collins.
Exhibiting: "Electromaze" electric air filter; "Air-Maze" air filter panels.

AIRTEMP DIV.—see CHRYSLER CORP.

A-J MFG. CO., 2119 Washington St., Kansas City 8, Mo.—Booths 325-327.
In attendance: Arthur S. Hurt, Jr., Anton Artmaier, Ernest S. Prenitt.
Exhibiting: Air conditioning and heating registers and grilles, diffusers, architectural grilles.

ALDRICH CO., Williams St., Wyoming, Ill.—Booths 329-331.
In attendance: P. M. Stephenson, E. L. Fox, B. Mulder.
Exhibiting: "Heat-Pak" high pressure oil burners, and boiler-burner units for oil or gas firing with burners readily interchangeable. "Bantam" boiler-burner unit, rated at 100,000 Btu per hr output, will be featured.

ALLAN ENGINEERING CO., Midway Rd. & Allan Lane, Dallas, Tex.—Booths 267-269.
In attendance: Walter J. Allan, Dick Ryan, Wm. T. Blair, Jim Briggle, Bill Ross.
Exhibiting: "FAF" central heating system; new "Cabinette" central heating system; new gas unit heater; new "Yearound" central system.

ALLIS-CHALMERS MFG. CO., Milwaukee 1, Wis.—Booth 820.
In attendance: Walter A. Meyer, Harvey Reinhard, J. L. Pratt, H. L. Reynolds, M. L. Murdock.
Exhibiting: Cutaway view of 2 by 2 in. "Electrifugal" pump with new design features; 6 by 6 in. single stage, double suction pump; 1 by ¾ in. close coupled, low head, single stage coolant and circulating pump; automatic "Vari-pitch" drive; sheaves; and starters.

ALLIS CO., LOUIS, 427 E. Stewart St., Milwaukee 7, Wis.—Booth 733.
In attendance: H. L. Land, J. J. Butler, R. C. Brown, C. G. Skidmore, Louis Allis, Jr., Ted Wieseman, Ralph Owen, Jim Daganhardt, R. C. Wareham.
Exhibiting: New gear motors (single, double and triple reduction); "Ajusto-Spede", new "Servatron" d-c variable speed drive; splash-proof motor; standard open motor; vertical "P-base"; cut-away explosionproof motor.

ALTON MFG. CO., 1112 Ross Ave., Dallas 2, Tex.—Booth 313.
In attendance: A. Ward Thornton, B. P. Edelman, P. R. Holmes, M. L. Ethridge.
Exhibiting: Refrigerated air conditioner (25 ton package unit complete with evaporative condenser built-in), air washer type evaporative cooler. Special "Turbospray" water distribution assembly for evaporative cooling units will be featured.

ALUMINUM COMPANY OF AMERICA, 801 Gulf Bldg., Pittsburgh 19, Pa.—Booth 724.

AMERICAN AIR FILTER CO., INC., 215 Central Ave., Louisville 8, Ky.—Booths 416-420.
In attendance: H. W. Pound, S. H. Fain, H. J. Noles, James W. May, Chas. D. Wright, C. W. Beatty, L. S. Gilbert, Jack Davis, Dallas S. Deem, H. J. Dalton.
Exhibiting: "Electro-Matic", "Electro-Cell", "Electro-PL", "Multi-Duty", "Auto-Airmat", "Deep Bed", "PL-24", "Amer-glas disposable filter"; and unit filters. Featured will be a new air filter using "Airmat" media as a travelling curtain for the collection of lint and dust of a similar nature, the unwinding of the clean media and the rewinding of the dust loaded media being automatic, and a new disposable filter utilizing non-combustible media housed in a cardboard container.

AMERICAN ARTISAN, 6 N. Michigan Ave., Chicago 2, Ill.—Booth 315.
In attendance: F. P. Keeney, Chas. E. Price, W. J. Osborn, G. C. Cutler, J. D. Thomas.
Exhibiting: American Artisan magazine; market information.

AMERICAN COOLAIR CORP., Jacksonville 3, Fla.—Booth 706.

AMERICAN GAS ASSOCIATION, 420 Lexington Ave., New York 17, N. Y.—Booths 274-374-474.
In attendance: Clifford E. Hall.
Exhibiting: Trade association activities.

AMERICAN RADIATOR & STANDARD SANITARY CORP., P. O. Box 1226, Pittsburgh 30, Pa.—Booths 333-337.
In attendance: D. D. Couch, H. L. Spindler, Harold C. Day, W. G. Senft, Horace R. Gale.
Exhibiting: "Winterglo" winter air conditioner, radiators for the "Winterglo" winter air conditioner, "Wyandotte" gas fired winter air conditioner, "Shawnee" gravity furnace, blower-filter unit, "Seneca" winter air conditioner, baseboard radiant panels, small and large "Empire" gas boilers, "Arco" convector, cutaway model "Arcoliner" oil burner, "Budget" water heater, "Severn" all-purpose boiler, Detroit Lubricator Co. controls, "Stan-flame" gas conversion burner and "Navaho" floor furnaces will be featured.

AMERICAN SHEET METAL CO., 607-11 First Ave., Dallas 10, Tex.—Booth 804.
In attendance: Robert E. Allison, Pauline M. Johansen, Woodrow W. Jones, Dick Dunham.
Exhibiting: Ash trays made in the booth which will be given away.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS, 51 Madison Ave., New York 10, N. Y.—Booth 436.
In attendance: ASHVE staff members.
Exhibiting: ASHVE activities for the advancement and education of the profession—membership, publications, research, and standards developed for benefit of the public.

AMES IRON WKS., Oswego, N. Y.—Booth 369.
In attendance: J. J. Doyle.
Exhibiting: 40 hp gas fired "Amesteam" generator, also smaller operating model. New 350 hp and 400 hp generators, for pressures of 15 to 200 lb and for firing with oil, gas or oil-gas combinations, will be featured.

ANEMOSTAT CORP. OF AMERICA, 10 E. 39th St., New York 16, N. Y.—Booth 401.
In attendance: F. J. Kurth, C. M. Wilson, V. F. Sell, W. F. Peters, F. Honerkamp, R. F. Hayes, J. W. Molitor, L. S. Gilbert, Jack Davis, W. E. Boyd, L. S. Pawkett.
Exhibiting: Circular air diffuser; square air diffuser; "Anemotherm" air meter.

APRIL SHOWERS CO., INC., 4126 Eighth St., N. W., Washington, D. C.—Booth 810.
In attendance: Jack Justice, Arthur Post, Leonard H. Holder, Robert Porter, W. J. Way II.
Exhibiting: Roof cooling systems and patented air cleaned nozzles, and featuring ranch house special application and air conditioning water saver.

ARMSTRONG CORK CO., Lancaster, Pa.—Booth 424.
In attendance: E. J. Stern, W. F. Nash, C. C. Lucas, E. M. Asbury, W. H. Busch.
Exhibiting: Low temperature and heat insulation materials for the air conditioning field, featuring construction details affecting air conditioning installations.

ARMSTRONG MACHINE WKS., 874 Maple St., Three Rivers, Mich.—Booth 428.
In attendance: O. E. Ulrich, T. H. Rea, Walter R. Allan.
Exhibiting: Glass model of steam trap operating at 6 lb pressure; humidifiers; gas purgers; and featuring room thermostat and water thermostat.

ARMSTRONG PRODUCTS CORP., P. O. Box 940, Seventh Ave. & First St., Huntington 12, W. Va.—Booths 251-253.
In attendance: L. O. Reese, M. S. Nicholson.
Exhibiting: Gas space heaters.

AUTOMATIC FIRING CORP., 6504 Olive Blvd., St. Louis 5, Mo.—Booth 800.

AUTOMATIC PRODUCTS CO., 2450 N. 32nd St., Milwaukee 10, Wis.—Booth 624.
In attendance: R. W. Johnson, E. A. Vallee, A. A. Schubert, R. H. Ludwig, D. Moerick, L. C. Thompson, R. E. Petersen, R. E.

Morton, A. L. Neva, H. D. Youmans, W. H. Cody, A. L. Cody.
Exhibiting: Gas heating equipment, oil burners and accessories, air equipment (including warm air heating equipment), air conditioning equipment, control instruments, refrigeration machinery.

BAKER REFRIGERATION CORP., South Windham, Maine—Booth 728.

BALTIMORE AIRCOIL CO. INC., 715 W. Pratt St., Baltimore 1, Md.—Booth 729.
In attendance: John Engalitcheff, Jr., Ray R. Forseille.
Exhibiting: New 1950 models of evaporative condensers, one of them featuring a direct driven fan. New line of evaporative condensers extending from 105 to 210 tons in a single unit will be announced.

BARBER-COLMAN CO., 220 Loomis St., Rockford, Ill.—Booth 207.

BAR-BROOK MFG. CO., INC., 6133 Linwood Ave., Shreveport, La.—Booth 631.
Exhibiting: Attic and window fans.

BAUER & BLACK—see **POLYKEN INDUSTRIAL TAPE DEPT.**

BELL & GOSSETT CO., Morton Grove, Ill.—Booth 303.
In attendance: E. J. Gossett, C. E. Pullum, R. E. Moore, R. A. Patterson, Frank C. Hackett, W. A. Boone, L. L. Arbuckle, Frank Gall.
Exhibiting: Working display of refrigeration components; industrial line of centrifugal pumps; forced hot water heating products, including boosters, relief and reducing valves, "Monoflo" fittings, "Airtrol" system, "Flo-control" valves, etc.

BLACK & DECKER MFG. CO., Towson 4, Md.—Booths 259-261.
In attendance: E. V. Schaub, Ross Martain, K. L. Pendleton, R. J. Johnston.
Exhibiting: Drills, sanders, shears, screw drivers, saws, hammers, bench grinders, and portable grinders, featuring 7 in. junior sanders and 12 ga "Porto-Shear."

BRONSON MFG. CO., 1237 Riverside Dr., Los Angeles 31, Calif.—Booth 123.

BRYANT HEATER DIV., AFFILIATED GAS EQUIPMENT, INC., 17825 St. Clair Ave., Cleveland 10, Ohio—Booths 459-461-463-465.
In attendance: R. A. Bissell, H. A. Kennedy, R. E. Duncan, J. M. O'Connor, J. C. Boyd, W. E. Boyd, S. H. Baldwin, L. S. Pawkett, W. N. Rast, R. C. Anderson, E. A. Smith, W. J. Leaumont, J. J. Rose, J. M. Johnson, A. W. Seier, Jr., P. J. Schaack, Russell Lyle, J. P. Cain, J. V. Ferguson, J. N. Crawford.
Exhibiting: Steam and water boilers, winter air conditioners, conversion burners, gravity furnaces, floor furnaces, unit heaters, wall heaters, space heaters, water heaters. "All-Weather" conditioner and oil fired winter air conditioner will be featured.

BUNDY TUBING CO., 8109 E. Jefferson, Detroit 14, Mich.—Booth 619.
In attendance: P. A. O'Connell, W. F. Kendall, A. F. Bernthal.
Exhibiting: Copper brazed, double wall "Bundyweld" tubing for radiant heating applications.

CARRIER CORP., 302 S. Geddes St., Syracuse 1, N. Y.—Booths 703-707-711.
In attendance: O. W. Bynum, C. U. Spriggs, J. A. Gazelle, C. V. Fenn, A. E. Stacey, W. H. Steitler, J. N. Gillham.
Exhibiting: First public display of 300 ton absorption machine, a steam operated refrigeration machine using plain water as a refrigerant; gas fired unit heater; system "Weathermaker" (nominal 31 ton); 5 hp self-contained "Weathermaker"; ½ ton window model room air conditioner; ¾ ton window model room air conditioner; ice cube maker; conduit "Weathermaster" (display model); food freezer; heavy-duty medium speed reciprocating compressor for ammonia or "Freon," 100 to 150 ton capacity.

CENTURY ELECTRIC CO., 1806 Pine St., St. Louis 3, Mo.—Booths 460-462.
In attendance: E. S. Moore, G. C. Henderson, A. Neher, Oliver S. Imes, V. G. Cox, W. B. Hill.
Exhibiting: Electric motors.

CHAR-GALE MFG. CO., Minneapolis 6, Minn.—Booths 822-824.

CHEMICAL ENGINEERING CO., 2800 Logan St., P. O. Box 1076, Dallas 1, Tex.—Booth 826.
In attendance: Webster Blocker, C. K. Hoffmeister, R. F. Thompson, G. A. Amberson, J. W. Potts.
Exhibiting: Water conditioning equipment, softeners, filters, chemical feeders, water conditioning chemicals, for cooling water, brines, boilers, for algae control, for chemically removing scale and other heat exchange deposits; water conditioning equipment; "Chenco" water conditioning compounds, scale solvent, and "Kil-Mos" algaecide.

CHRYSLER CORP., AIRTEMP DIV., 1600 Webster St., Dayton 1, Ohio—Booth 203.
In attendance: William C. Newberg, C. S. Stackpole, William B. Magill, G. S. Cobb, V. E. Houston, W. J. Snodgrass, M. P. Veith, J. B. Walden, R. L. Boyd.
Exhibiting: Air conditioning packaged units and central station systems, cooling towers, gas and oil fired heating equipment, conversion oil burners, gas fired furnaces.

CLIMAX MACHINERY CO., 301 S. La Salle St., Indianapolis 6, Ind.—Booth 213.
In attendance: Wm. J. Campbell, Robert S. Miller, H. C. Thomas, S. S. Robinson, E. H. Steffeld, J. D. Sheehan, George Clark, M. H. Fuller.
Exhibiting: "Climax D-16" room cooler, new "Climax F-20" and "Climax B-22" home coolers; assorted sizes of evaporative coolers, including portable evaporative cooler.

CLOW & SONS, JAMES B., 201 N. Talman Ave., P. O. Box 6600 A., Chicago 80, Ill.—Booth 815.
In attendance: Milton T. Clow, A. J. Belew, S. W. Boyd.
Exhibiting: "Gastream" radiators and gas fired unit heaters, the latter having cast iron heat exchanger cast in one piece with combustion chamber.

COLEMAN CO., INC., 250 N. St. Francis, Wichita 1, Kans.—Booth 370.
In attendance: Dean Olds, Harry Giwosky, Shirley Campbell, V. D. Call, Jack Kice, Ed. G. Johnson, H. W. Morton.
Exhibiting: "Blend-Air" pre-engineered forced warm air heating system, combining high velocity heat conduits with low velocity room outlets: complete line of gas and LP gas floor furnaces; wall heaters; oil floor furnaces; space heaters; water heaters; central heating plants. Working "Blend-Air" display will be featured.

COMBUSTION CONTROL CORP., 77 Broadway, Cambridge 42, Mass.—Booths 255-257.
In attendance: Dan Colbath, L. R. Ward, John A. Long, L. D. Sibley, D. A. Warriner, R. A. Warriner.
Exhibiting: "Fireye" photoelectric and electronic flame failure safeguards and programming controls for industrial gas and oil burners; photoelectric smoke alarms and indicators for combustion control; photoelectric smoke detectors for air conditioning duct systems. New electronic flame failure safeguard for gas burners and new smoke indicator for combustion control will be featured.

COMFORT PRODUCTS CORP., 2220 S. Lamar St., Dallas 2, Tex.—Booth 212.
In attendance: B. J. Spiteka, J. Sidney Jones, J. V. Mariner, Jr., Jack Cronk, Jack O'Meara.
Exhibiting: Air washer, 350 cfm (plexiglas); complete line of evaporative coolers.

COMMERCIAL FILTERS CORP., 18 W. Third St., Boston 27, Mass.—Booth 218.
In attendance: E. W. Sherburne.
Exhibiting: Filters for heating oils used with both gravity and pressure type oil burners and for bulk filtration of fuel by oil companies, etc.

CONGRESS DRIVES DIV., TANN CORP., 3750 E. Outer Dr., Detroit 34, Mich.—Booth 832.
In attendance: Lee O. Witzenburg, Joseph E. Corbett, William J. Bernhart, John Feller, Edward Tann.
Exhibiting: Variable speed pulleys, V-belts, pulleys, V-belt clutch, and featuring new oil sealed, self aligning pillow block or bearing (½, ⅝, ¾, and 1 in.).

CONNOR ENGINEERING CORP., W. B., 114 E. 32nd St., New York 16, N. Y.—Booths 119-121.
In attendance: H. A. Baker, J. H. Bartol, T. L. Smith.
Exhibiting: "Kno-Draft" adjustable air diffusers; "Dorex" activated carbon air recovery systems; "Dorex" activated carbon specialties; new "Dorex" food saver.

CONTINENTAL AIR FILTERS, INC., 2520 Helm St., Louisville, Ky.—Booth 211.
In attendance: Wm. K. Gregory, A. S. Lewis, Jr., C. P. Hegan, L. P. Bryant, Elmer T. Gessell, John A. Ray, J. D. Poythress, C. D. Collins.
Exhibiting: Automatic self cleaning air filters; washable unit filters.

COPELAND REFRIGERATION CORP., Sidney, Ohio—Booth 225.

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.—Booth 204.

CURTIS REFRIGERATING MACHINE DIV., 1905 Kienlen Ave., St. Louis 20, Mo.—Booth 307.
In attendance: H. C. Morrison, H. J. Nettler, C. L. Angell, N. H. Behrend, W. F. Henke, J. P. Gilbert.
Exhibiting: 2, 3, 5 and 7½ ton self-contained packaged air conditioning units; 5, 20 and 40 hp condensing units; section compressors and condensers. The 2, 3 and vertical 7½ ton packaged air conditioning units and 20, 30 and 40 hp condensing units are new products.

CYCLOTHERM CORP., 157 E. First St., Oswego, N. Y.—Booth 359.
Exhibiting: 80 hp gas fired steam generator.

DAY & NIGHT DIV., AFFILIATED GAS EQUIPMENT INC., Monrovia, Calif.—Booth 360 (see also Southland Supply Co.)

DETROIT LUBRICATOR CO., 5900 Trumbull Ave., Detroit 8, Mich.—Booth 614.
In attendance: K. B. Thorndike, W. D. Knox, J. F. Page, H. L. Walker.
Exhibiting: Heating controls and equipment for gas and oil fired warm air, steam, and hot water heating systems; refrigeration expansion valves and solenoid valves for air conditioning.

DEVICES, INC., 214 E. 53rd St., New York 22, N. Y.—Booth 117.
In attendance: V. L. Yepsen, E. R. Falkenburg.
Exhibiting: "Miracle" surface anchors and adhesives.

DEWEY-SHEPARD BOILER CO., Peru, Ind.—Booth 454.

In attendance: Robert B. Rhoads, George D. Arnold, Herman E. Lundt.
Exhibiting: Gas and oil fired steam and water boilers and water heaters; featuring small home hot water boiler.

DODGE CORP., F. W., 110 W. 40th St., New York 18, N. Y.—Booth 825.
Exhibiting: Publications and services.

DOLE REFRIGERATING CO., 5910 N. Pulaski Rd., Chicago 30, Ill.—Booth 737.

DOLE VALVE CO., 1901-1941 Carroll Ave., Chicago 12, Ill.—Booth 326.
In attendance: John L. Dole, R. M. Ellis, J. Francis Lund, Stuart G. Phillips, H. Aronson, A. Toll.
Exhibiting: Air and vacuum valves, hot water air valves, water mixers, thermostatic air controls for forced warm air systems, flow controls.

DOLLINGER CORP., 11 Centre Park, Rochester 3, N. Y.—Booths 226-228.
In attendance: Lewis L. Dollinger, Jr., C. E. Sweiven, J. V. Fraychinaud, J. P. Asheraft.
Exhibiting: Air, gas and liquid filters.

DOMESTIC ENGINEERING CO., 1801 Prairie Ave., Chicago 16, Ill.—Booth 129.
Exhibiting: Publication.

DOYLE VACUUM CLEANER CO., 225 Stevens St., S. W., Grand Rapids 2, Mich.—Booth 271.
In attendance: Patrick E. Doyle, Harry F. Arnold.
Exhibiting: "Grand Rapids" furnace cleaner for cleaning warm air furnaces, boilers and duct work; furnace and boiler cleaning attachments and chimney cleaning outfit.

DUO-THERM DIV., MOTOR WHEEL CORP., Lansing 3, Mich.—Booth 339.
In attendance: A. Frantz, L. F. Neely, K. Egeler, L. C. Vandertill.
Exhibiting: Oil burning space heaters, gas burning space heaters, gas burning floor furnaces, oil burning water heaters, gas burning water heaters.

DURANT INSULATED PIPE CO., P. O. Box 88, 1015 Runnymede St., East Palo Alto, Calif.—Booth 806.
In attendance: William H. Buck, Patrick W. Neely.
Exhibiting: Samples, cutaways and illustrations of underground insulated pipe conduit.

DWYER MFG. CO., F. W., 317 S. Western Ave., Chicago 12, Ill.—Booth 316.
In attendance: F. W. Dwyer, J. G. Dwyer.
Exhibiting: Draft gages, manometers, CO₂ indicators, pitot tubes, air filter gages, and featuring "Magnehelic" low pressure gages.

FAIRBANKS, MORSE & CO., 600 S. Michigan Ave., Chicago 5, Ill.—Booth 104.

FARR CO., 2615 Southwest Dr., Los Angeles 43, Calif.—Booth 111.
In attendance: R. S. Farr, M. S. Farr, W. H. Welty, F. X. Shea.
Exhibiting: "Far-Air" self-washing filter, panel filter, rotary cooler.

FASCO INDUSTRIES, INC., 255 N. Union St., Rochester 2, N. Y.—Booths 326-328.
In attendance: H. M. Sylvester, D. R. Schroedel, C. A. Button.
Exhibiting: Shaded pole motors and blowers, and featuring new six pole motor rated from 1/30 to ¼ hp.

FEDDERS-QUIGAN CORP., Buffalo 7, N. Y.—Booth 719.

FORNEY ENGINEERING CO., 2705 Hawes Ave., Dallas 9, Tex.—Booth 632.
In attendance: R. H. Forney, Carl M. Tribble, Charles R. Walters, Ross Forney.
Exhibiting: Gas burners for commercial heating boilers, package controls and safety devices.

FRICK CO., Waynesboro, Pa.—Booth 355.
In attendance: P. H. Buch, W. O. Kline, C. C. Smith, J. C. Rust, A. E. Roebke, L. C. Nettleship, George M. Basore.
Exhibiting: Cutaway four cylinder new "Eclipse" compressor with a special slow speed drive; six cylinder complete new "Eclipse" compressor.

FRIGIDAIRE DIV., GENERAL MOTORS CORP., 300 Taylor St., Dayton 1, Ohio—Booth 133.
In attendance: C. F. Wood, Earl Boyer, P. B. Beemsterboer, R. I. McKenzie, D. P. Dukeminier, H. E. Martin, R. Q. Bachman, J. R. Remick.
Exhibiting: ½ and 1 hp window type room air conditioners; remote floor type room air conditioner; 3 and 5 hp package store air conditioners; 10 ton package air conditioner; reciprocating compressors ranging in capacity from 1 to 10 hp; "Multipath" cooling units; bottle type water cooler. Exhibit will include illuminated cutaway models, some operating in slow motion, and a special display illustrating summer-winter air conditioning. A cutaway model of an electric dehumidifier will feature the actual removal of moisture from the air.

GANNON CO., RUSSELL R., 700 Dixie Terminal Bldg., Cincinnati 2, Ohio—Booth 423.
In attendance: Russell R. Gannon, Frank Lewis, F. S. Goepper.
Exhibiting: School house heating and ventilating units, both corridor and under-the-window types.

GENERAL CONTROLS CO., 801 Allen Ave., Glendale 1, Calif.—Booths 264-266 (see also Southland Supply Co.)
In attendance: J. F. Ray, W. A. Ray, A. W. Ray, W. L. Kell, Fred Weldon, D. S. Bentley, W. M. Lewis, H. C. Lindstrom, W. R. Nason, A. E. Hess, R. L. Farmer, R. C. Allen, W. E. Conkright.
Exhibiting: Automatic controls for heating, cooling, and air conditioning.

GENERAL ELECTRIC CO., AIR CONDITIONING DEPT., 5 Lawrence St., Bloomfield, N. J.—Booths 636-640.
Exhibiting: Remote and self contained air conditioning; automatic heating.

GENERAL FILTERS, INC., 12890 Westwood Ave., Detroit 23, Mich.—Booth 426.
In attendance: Arthur D. Redner, Mrs. Grace Redner, Robert G. Gregory, Roland A. Redner.
Exhibiting: Three models of fuel oil filters.

GENERAL MOTORS CORP.—see FRIGIDAIRE DIV.

GLASFLOSS CORP., 155 E. 44th St., New York 17, N. Y.—Booth 830.
In attendance: R. R. Pryor, T. R. Simkins, R. P. Anderson.
Exhibiting: "Glasfloss" air filters and pipe wrap. New refill type glass fiber air filter, the frame for which is used over and over again, will be featured.

GOLD TOP HEATING, INC., 1400 E. Second St., Butte, Mont.—Booth 732.
In attendance: T. J. Sullivan, E. J. Mueller, M. K. Gordon, Jr., W. R. Piatt.
Exhibiting: "Truliradiant" gas burner; "Demandtrol" gas valve; positive distribution fitting; draft governors; and featuring completely packaged steel hot water boiler for residential use, fully convertible from oil to gas firing, and vice-versa.

GOODFELLOW CO. INC., E. D., 346 N. Front at Jackson, Memphis 3, Tenn.—Booth 421.
In attendance: Frank Conaway, R. D. Elgin, E. D. Goodfellow.
Exhibiting: Induced draft cooling towers.

GOVERNAIR CORP., 513 N. Blackwelder, Oklahoma City 1, Okla.—Booth 408.
In attendance: Harold Feldstein, Wm. H. Hollingsworth, Wm. H. Moler, Russ S. Oakleaf, W. A. Quinn, A. M. Keyser.
Exhibiting: Blast coils for heating and cooling; fan and coil cabinet; evaporative condenser; self contained air conditioner.

GREENLEE TOOL CO., 2136 12th St., Rockford, Ill.—Booth 231.
In attendance: Ray J. Samuelson, A. H. Hawkinson, Tom Steele, Rob El Cox.
Exhibiting: Hand and power driven hydraulic pipe and conduit benders; hand and hydraulic knockout punches; hand and power driven hydraulic pipe pushers; pipe sets of tools for boring holes; auger bits; car bits; chisels; gouges; and draw knives. No. 785-BE pipe and rigid conduit bender for bending 5 in. and smaller in an automatic controlled machine will be shown for first time as will No. 767 hand operated portable lightweight hydraulic pump for operating knockout punches in size ¾ in. to 4 in.

GUSTIN-BACON MFG. CO., 1412 W. 12th, Kansas City 7, Mo.—Booth 252.
In attendance: P. O. Craig, J. O. Brelsford, J. B. Weltmer, G. C. Jordan, G. R. Miller.
Exhibiting: "Ultralite" insulations.

HEATING, PIPING & AIR CONDITIONING, 6 N. Michigan Ave., Chicago 2, Ill.—Booth 315.
In attendance: F. P. Keeney, Chas. E. Price, W. J. Osborn, C. M. Burnam, Jr., G. C. Cutler, J. D. Thomas.
Exhibiting: Heating, Piping & Air Conditioning magazine; market information.

HEATING & VENTILATING, 148 Lafayette St., New York 13, N. Y.—Booth 217.
Exhibiting: Publication.

HOLLY MFG. CO., 875 S. Arroyo Pkwy., Pasadena 2, Calif.—Booths 221-223.
In attendance: Fred C. Farmer, Sam Quincy, J. Stanley Johnson, Roger Lauhach.
Exhibiting: "Stubby" floor furnaces, new "NarroWall" vented wall heaters.

HUNTER FAN & VENTILATING CO., 400 S. Front St., Memphis 2, Tenn.—Booth 811.
In attendance: Tom Jones, Parker T. Finch, George B. Richmond, Milton A. Dreyfuss.
Exhibiting: Package attic fans, window fan, belt driven fans, exhaust fan, "Airspread" fans, oscillating fans, floor fans.

ILLINOIS TESTING LABORATORIES, INC., 420 N. La Salle St., Chicago 10, Ill.—Booth 232.
In attendance: W. J. Bailey, M. J. Rauscher, R. L. Tate, J. C. Roe.
Exhibiting: Temperature and air velocity measuring instruments, and featuring new pyrometer for radiant heating applications.

IMPERIAL BRASS MFG. CO., 1200 W. Harrison St., Chicago 7, Ill.—Booths 812-814.
In attendance: C. H. Benson, Harry Pearson, Milton Copeland.
Exhibiting: Tube working tools; oil burner fittings, valves and tools; refrigeration and air conditioning parts and service tools; LP gas fittings, valves and tools; plumbing specialties. "Rol-Air" flaring tool, special "Hi-Duty" tube fittings and gear type tube benders will be featured.

INGERSOLL-RAND CO., 11 Broadway, New York 4, N. Y.—Booth 715.
Exhibiting: Pumps, compressors, air and electric tools.

INTERNATIONAL MFG. CO., 600 E. Grand, Oklahoma City, Okla.—Booth 603.
In attendance: James D. Harden, John W. Schultz.
Exhibiting: One ton remote type refrigerated air conditioning unit, walnut grained console type cabinet; ¾ ton remote type refrigerated air conditioning unit, closet model, both of

which may be operated either with "Freon" or with chilled and hot water.

INTERNATIONAL METAL PRODUCTS CO., 500 S. 15th St., Phoenix, Ariz.—Booths 613-615-617.
In attendance: A. L. Oxley.
Exhibiting: "Arctic Circle" and "Imperial" evaporative air coolers.

INTERNATIONAL SALES CO., 2045 Evans Ave., San Francisco 24, Calif.—Booth 330.
In attendance: Robert G. Tuck, James F. Deane.
Exhibiting: Warm air furnaces: Closet model—forced air. Unit 14 in. wide and 28 in. deep will be featured.

IRON FIREMAN MFG. CORP., 3170 W. 106th St., Cleveland 11, Ohio—Booths 319-321-323.

JEFFERSON ELECTRIC CO., Bellwood, Ill.—Booth 222.
In attendance: C. T. Harnett, J. R. Bailey.
Exhibiting: Oil burner ignition transformers.

JENKINS BROS., 80 White St., New York 13, N. Y.—Booth 108.
In attendance: C. W. Norton, K. H. Gape, Jack Berly, Tom Deupree, A. M. Street.
Exhibiting: Bronze, iron and steel valves in globe, gate, check, angle and "Y" patterns. A scale model of a piping system will be on display to show actual valve installation.

JOHNSON SERVICE CO., 507 E. Michigan St., Milwaukee 2, Wis.—Booth 601.
In attendance: M. M. Herrick, H. V. Alexander, J. P. Grizzard, C. J. Selasky.
Exhibiting: Automatic temperature and humidity control equipment, in actual operation, for heating, cooling, ventilating, air conditioning and industrial processing. There will also be miniature models of various types of heating, ventilating and air conditioning systems with proper control hookups shown. New electronic control apparatus will be included.

JOY MFG. CO., Oliver Bldg., Pittsburgh 22, Pa.—Booth 113.
In attendance: R. Mancha, R. A. Heindel, C. L. Tinker.
Exhibiting: "Axivane" fans for industrial, commercial, aircraft and home ventilation.

KEENEY PUBLISHING CO., 6 N. Michigan Ave., Chicago 2, Ill.—Booth 315.
In attendance: F. P. Keeney, Chas. E. Price, W. J. Osborn, C. M. Burnam, Jr., G. C. Cutler, J. D. Thomas.
Exhibiting: Heating, Piping & Air Conditioning magazine; American Artisan magazine; market information.

KENDALL CO.—see POLYKEN INDUSTRIAL TAPE DEPT.

KENNARD CORP., 1819 S. Hanley Rd., St. Louis 17, Mo.—Booth 841.
In attendance: Sam M. Kennard, III, A. G. Loeffel, Ben M. McDougall, Frank M. Lehman, Wm. Steinkamp.
Exhibiting: Blast finned coils, air conditioning blower unit, evaporative condensers, cooling towers. New products include "Pancake" unit, a ceiling type air conditioning unit for apartments, hotels and offices with a very shallow depth for application with limited head room.

KEWANEE BOILER CORP., Kewanee, Ill.—Booth 407.
In attendance: J. M. Hartman, W. E. Lewis, Elmer T. Gessell, John A. Ray, J. Doug Poythress, C. Doug Collins.
Exhibiting: "Type C" welded boiler for low pressure steam heating; "Square Heat Type R" unjacketed boiler; "Bubbling" boiler for gas fired operation to demonstrate generation of steam through illuminated observation ports; "Scottie Jr." boiler, a portable 9 hp. unit for power and process steam.

KOHLER CO.—see SOUTHLAND SUPPLY CO., INC.

KRITZER RADIANT COILS, INC., 2901 W. Lawrence Ave., Chicago 25, Ill.—Booth 107.
In attendance: M. W. Knight, C. Newton, C. Johnson.
Exhibiting: Radiant heating coils; new baseboard radiation; commercial "Fin Pipe" heating coils for industrial, institution, apartment buildings, mercantile, railroad, maritime, etc. Cutaway ceiling and wall will show radiant coils installed.

LEWIN-MATHES CO., 1111 Chouteau Ave., St. Louis 2, Mo.—Booths 417-419.

LEWIS & CO., W. E., 610 Thomas Bldg., Dallas 1, Tex.—Booth 215.
In attendance: R. W. Cumming, G. B. Burke, J. A. Ray, E. Gessell.
Exhibiting: "Sarco" steam specialties for industrial plants, medium and high pressure steam heating systems. New "Sarcotherm" weather control system for hot water and radiant heating in residences, apartments, housing projects, hospitals, and large industrial and institutional buildings, will be featured.

LIBBEY-OWENS-FORD GLASS CO., Nicholas Bldg., Toledo 3, Ohio—Booth 434.
In attendance: J. C. Mackenzie, H. A. Schofield, R. B. Davis, C. E. Shepperly, Glenn T. Dunn, Jr., John L. Cox.
Exhibiting: "Thermopane" insulating glass, "L-O-F" heat absorbing plate glass, "Golden" plate glass (fade reducing). Changing panoramic views of Texas landscapes viewed through picture window, and scale models of food and apparel shops showing functional use of heat absorbing and fade reducing glass, will be featured.

LILIE-HOFFMANN COOLING TOWERS, INC., 4239 Duncan Ave., St. Louis 10, Mo.—Booth 834.
In attendance: Paul R. Hoffmann, F. W. Rabe, Ray Guyer.
Exhibiting: Scale model induced draft cooling tower and an atmospheric tower.

LIMA REGISTER CO., 651 N. Baxter St., Lima, Ohio—Booth 227.

LITTLE GIANT VAPORIZER CO., INC., 5101 Classen Blvd., Oklahoma City 6, Okla.—Booth 125.
In attendance: P. C. Depew, John E. Mitchell, J. Claude Whittle.
Exhibiting: Vaporizers, pumps, controlled humidity units, condensate removal pumps.

LOCKFORMER CO., 4615 W. Roosevelt Rd., Chicago 50, Ill.—Booth 317.
In attendance: George W. Lamberson, Harold G. Flagler, Edward C. Bill, John Davis.
Exhibiting: "Lockformer" No. 24 with power flanging attachment; "Lockformer" No. 20; "Cleatformer"; Easy Edger."

LONE STAR GAS CO., 301 S. Harwood St., Dallas 1, Tex.—Booth 472.

MARLEY CO. INC., Fairfax & Marley Rds., Kansas City 15, Kans.—Booth 410.
In attendance: Roy W. Maze, Lyle A. Christensen, Robert McFadin, Leon T. Mart, Elmer Gessell, Walter Smith, Joe McKinley.
Exhibiting: New 1950 "Aquatower" and "Vairflo" actual cooling towers, "Double Flow" cooling tower model, nozzles.

MARLO COIL CO., 6135 Manchester Ave., St. Louis 10, Mo.—Booths 605-607.
In attendance: L. C. Pellegrini, C. D. Marlo, F. G. Meyers, F. E. Ince, G. E. Roepke, H. R. Iverson, W. B. Moses, Jr.
Exhibiting: Evaporative condensers and cooling towers equipped with "Lektrotector"; floor type air conditioner; spray type dehumidifier; blast coils for cooling and heating; unit air conditioners. A new non-ferrous dehumidifier, evaporative condensers, cooling towers equipped with "Lektrotector", and remote type room conditioners will be featured.

McDONNELL & MILLER, INC., Wrigley Bldg., 400 N. Michigan Ave., Chicago 11, Ill.—Booth 230.
In attendance: E. N. McDonnell, Nils W. Swanson, Leo J. Kmiecik, W. E. Gleason, George La Roi, Phil Ashcraft, E. G. Langhammer, A. J. Rummel.
Exhibiting: Boiler water level controls, safety relief valves, humidifier water level controls, and related equipment, and featuring new safety relief valve, new low water cutoff for hot water boilers, new water column type low water cutoff for gas fired boilers.

MID-CONTINENT METAL PRODUCTS CO., 1960 Clybourn Ave., Chicago 14, Ill.—Booths 468-470.
In attendance: A. F. Zitzewitz, E. J. Hardike, C. F. Petersen.
Exhibiting "Lo-Blast Economite" power type residential gas conversion burner equipment and standard line of "Lo-Blast" burners, featuring equipment used in firing larger commercial and industrial boilers.

MIDWEST AUTOMATIC CONTROL CO., Subsidiary of Midwest Air Control, 510 Third St., Des Moines 9, Ia.—Booth 643.
In attendance: Perry T. Crane, Harry R. Frankle, Mrs. Harry R. Frankle, Mrs. Belva Scoles, Felix M. Roth.
Exhibiting: "Magic Dial" basic automatic control system for heating, cooling or combination, which is operated by single master switch; "Magic Wire" numerically coded wire, with terminals numbered to correspond with numerals on wire to reduce installation costs and trouble shooting.

MILWAUKEE GAS SPECIALTY CO., 710 N. Jackson St., P. O. Box 461, Milwaukee 1, Wis.—Booths 456-458.

MINNEAPOLIS-HONEYWELL REGULATOR CO., 2747 Fourth Ave. S., Minneapolis 8, Minn.—Booths 744-745 (see also Southland Supply Co.)
In attendance: J. E. Haines, A. H. Lockrae, C. D. Lyford, J. S. Locke, V. D. Wissmiller, R. H. Jacobs, B. C. Benson, K. L. Wilson, K. W. Schick, H. C. Carlson, J. R. Bergan, J. A. Young, W. J. Baak, H. E. Chapler, Ralph Mixon, T. S. Carley, Fred Brandt, Richard Williamson, Chas. A. Walker, Chas. C. Grimes, Harry L. Mayes, Curtis Zahn, Z. A. Marsh, J. F. Cummiskey, H. L. Canoyer, L. B. Belford, T. McDonald.
Exhibiting: Automatic controls for heating, ventilating, air conditioning, and featuring electronic air conditioning control system, electronic "Cyclotrol," pneumatic automatic reset control, self-powered gas control system, new diaphragm gas valve, flexible element combination control, new "Sem-automatic" time switch, new unit heater thermostat with special sub-base.

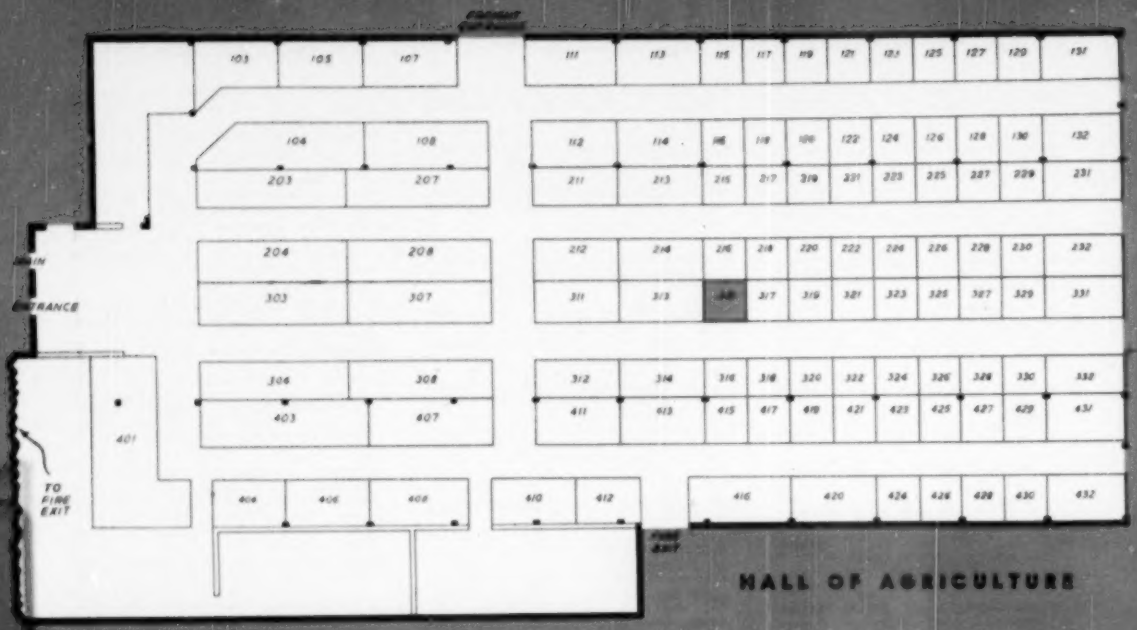
MITCHELL MFG. CO., 2525 Clybourn Ave., Chicago 14, Ill.—Booth 629.

MORSE-SMITH-MORSE INC., 165 Dexter Ave., Watertown 72, Mass.—Booth 128.
Exhibiting: Fusible oil valves for use in kitchen ranges, space heaters and floor furnaces; oil filters; thermal switches; level valves; tank gages; vent caps.

MOTOR WHEEL CORP.—see DUO-THERM DIV.

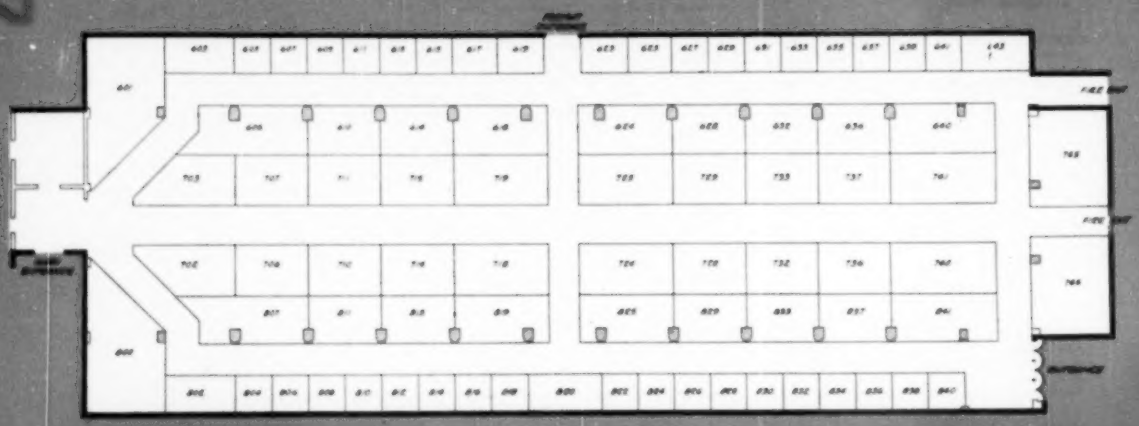
MUELLER FURNACE CO., L. J., 3005 W. Oklahoma Ave., Milwaukee 7, Wis.—Booths 304-308.
In attendance: H. P. Mueller, C. L. Hewitt, Jr., F. J. Nundist, L. M. Becknell, J. H. Reock.
Exhibiting: Complete line of gas, oil and coal heating and air conditioning equipment, and featuring a number of new products.

MULTI-VENT DIV.—see PYLE NATIONAL CO.

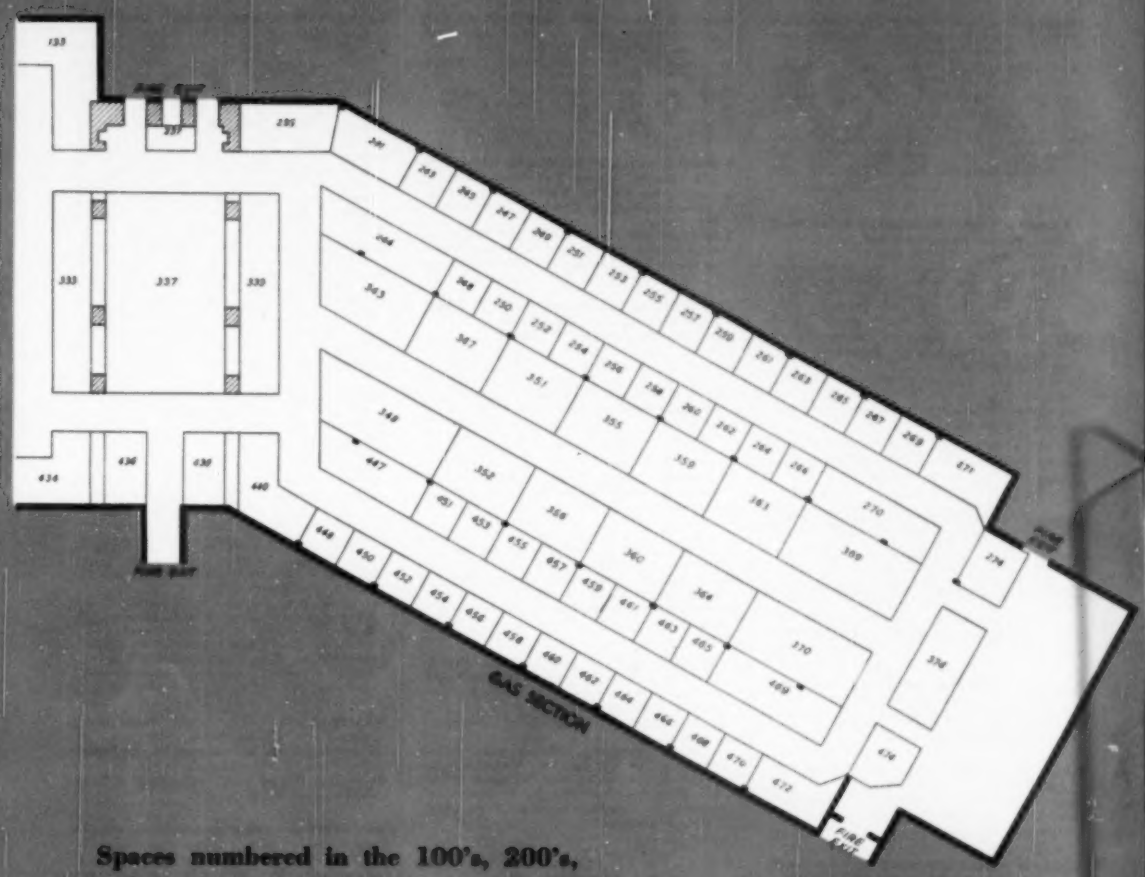


HALL OF AGRICULTURE

Booth Layout for Exposition at State Fair Park, Dallas

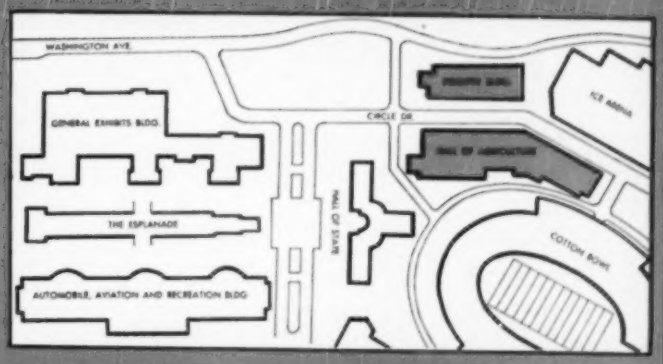


POULTRY BUILDING



Spaces numbered in the 100's, 200's, 300's and 400's are in the Hall of Agriculture and spaces in the 600, 700 and 800 series are in the Poultry Building. Keeney Publishing Co., publisher of Heating, Piping & Air Conditioning and American Artisan, is in Booth No. 315

Location of the two exhibit buildings, the Hall of Agriculture and the Poultry Building



MUNDET CORK CORP. (INSULATION DIV.), 7101 Tonnelle Ave., North Bergen, N. J.—Booths 245-247-249.
In attendance: H. H. Bruns, Samuel Garre, Jr., Leon Choate, A. A. Stone, B. Botter, J. J. Steiger, O. Shepard, B. Graff, S. J. Shilcutt, E. J. Stansbury, C. Vass, G. M. Roland, A. J. Essery.
Exhibiting: Corkboard low temperature insulation and "Jointite" cork pipe covering, and featuring magnesia high temperature pipe covering.

NELSON CORP., HERMAN, 1824 Third Ave., Moline, Ill.—Booth 440.
In attendance: Charles S. Stock.
Exhibiting: Unit ventilators, unit heaters, propeller fans, unit blowers, centrifugal fans, portable heaters and ventilators.

NESBITT, INC., JOHN J., State Rd. & Rhawn St., Holmesburg, Philadelphia 36, Pa.—Booth 633.
In attendance: Michael J. Murray, Albert J. Nesbitt.
Exhibiting: "Syncretizer" schoolhouse unit ventilator; water coils.

NIAGARA BLOWER CO., 405 Lexington Ave., New York 17, N. Y.—Booth 741.

NORMAN PRODUCTS CO., 1150 Chesapeake Ave., Columbus 12, Ohio—Booths 404-406.
In attendance: D. D. Piper, E. A. Norman, Jr., R. G. Dawley, L. E. Minns, C. H. Woller, Claude S. Slocum, N. M. Reisdorph.
Exhibiting: "Southerner" horizontal gas furnace, "Master" gas conversion burner, "Deluxe" gas conversion burner, "Twinfuel" conversion burner, "Twinfuel" furnace, gas designed furnace.

OHIO FOUNDRY & MFG. CO., Black St., Steubenville, Ohio—Booths 404-406.
Exhibiting: Gas fired room heaters, new evaporative cooler.

ORAN CO., 2232 S. Third St., Columbus 7, Ohio—Booth 248.
In attendance: H. W. Kelly, J. E. Ledger.
Exhibiting: New gas fired floor furnace, oil fired floor furnace.

OUTSIDE VENETIAN BLIND CO., 2625 Elm St., Dallas 1, Tex.—Booths 710-714-718.
In attendance: Colin Jones, Paul Miller, James Venable, Roland Bandy.
Exhibiting: "Clearview" outside venetian blinds and venetian windows, for reducing air conditioning tonnage requirements.

OWENS-CORNING FIBERGLAS CORP., 1833 Nicholas Bldg., Toledo 1, Ohio—Booths 112-114.
In attendance: C. L. Rowley, John Dowd, J. L. Neal, L. L. Frost, Jr., M. W. Butler.
Exhibiting: Improved air filters, duct insulation, filtration products, boiler insulation.

PACIFIC STEEL BOILER DIV., U. S. RADIATOR CORP., 300 Buhl Bldg., Detroit 26, Mich.—Booths 130-132.
In attendance: H. B. Steggall, E. J. Grady, E. F. Hackett, Robert Boose, J. R. Dowdell, N. R. Collins, D. L. Moody, T. R. Frymire, Al Leonard, Grover Worley, Jerry Hays, Joe Merrill, Lee Adams, W. D. Johnson, S. T. Lake, Joe Powell, Ed Gravens, C. S. Dershimer, Hugh McMillan.
Exhibiting: Steel boilers and induced draft fan, and featuring action display of split firebox boiler.

PALMER MFG. CORP., 2200 W. Fillmore, Phoenix, Ariz.—Booth 702.
In attendance: Leetate D. Smith, Paul McAdams, Sam Keeble.
Exhibiting: Evaporative air coolers, gas fired heating equipment, new window exhaust fans.

PATTERSON-KELLEY CO. INC., East Stroudsburg, Pa.—Booths 838-840.

PAYNE FURNACE DIV., AFFILIATED GAS EQUIPMENT, INC., 801 Royal Oaks Ave., Monrovia, Calif.—Booth 343.
In attendance: Art J. Horn, Bert P. Fisher, Harry W. Presseur.
Exhibiting: Console, floor furnace, "Panelair", "Sentry," "Space Saver," "Zone air," "CB" commercial heater.

PENNSYLVANIA FURNACE & IRON CO., 316 Pine St., Warren, Pa.—Booth 356.
In attendance: R. L. Blodgett, Howard R. Lauffenburger, C. S. Andersen, H. J. Harvey, Roy Hanson.
Exhibiting: Gas fired gravity and forced air furnaces; gas fired water and steam sectional boilers for both domestic and commercial uses.

PITTSBURGH CORNING CORP., 307 Fourth Ave., Pittsburgh 22, Pa.—Booth 127.
In attendance: Robert F. Benda, Robert F. Quinn.
Exhibiting: "PC" glass blocks and "Foamglas" insulation. By use of installation photographs and product samples, display will emphasize advantages of glass blocks and insulation for increasing efficiency of air conditioning systems.

PLUMBING & HEATING JOURNAL, 45 W. 45th St., New York 19, N. Y.—Booth 430.
Exhibiting: Publication.

POLAIRE COOLER CO., 141 E. Jackson St., Phoenix, Ariz.—Booth 610.
In attendance: R. E. Walklin, E. H. Osburn, A. E. Cornwall.
Exhibiting: Evaporative cooler with revolving pad, and component parts.

POLYKEN INDUSTRIAL TAPE DEPT., BAUER & BLACK, DIV. OF KENDALL CO., 222 W. Adams St., Chicago 6, Ill.—Booths 116-118.
In attendance: William J. Miller, Ernest E. Dickinson.
Exhibiting: Industrial adhesive tape product adaptable to heating and ventilating industry, and featuring new "Fiberglas" flexible duct connector and a "revolutionary" material for sealing gravity warm air pipes, ducts, insulation, etc.

POPELL CO. OF TEXAS, L. F., 1716 Laws St., Dallas 2, Tex.—Booth 263.

POWERS REGULATOR CO., 2720 Greenview Ave., Chicago 47, Ill.—Booths 833-837.
In attendance: Jos. W. Powers, Kenneth M. Stevens, R. G. Lyford, C. C. Quin, J. R. Patten.
Exhibiting: Thermostats, hygrostats, diaphragm valves, damper motors, dial thermometers, steam regulators, recording thermometers, recording regulators. New diaphragm valves for radiators and coils and improved products for other applications will be featured.

PRAT-DANIEL CORP.—see THERMOBLOC DIV.

PYLE NATIONAL CO., MULTI-VENT DIV., 1373 N. Kostner Ave., Chicago 51, Ill.—Booth 432.
In attendance: D. J. Packard, George K. Raider, R. B. Black, J. P. Ashcraft, J. P. Maguire, Thomas E. Price.
Exhibiting: "Multi-Vent" panels for low velocity air diffusion "for draft-free and uniform heating, ventilating, and air conditioning." A working demonstration model, showing the operation and effect of low velocity air distribution, and new sizes of equipment will be featured.

QUIET HEET MFG. CORP., 135 N. J. Railroad Ave., Newark 5, N. J.—Booth 816.
In attendance: E. M. Peters, S. L. Sloan.
Exhibiting: "Quiet Kool" ½ hp and ¾ hp room air conditioners; "Quiet Heet" domestic oil burners and gas burners; "Quiet Breeze" exhaust fan; "Quiet Dri" dehumidifier.

RADIANT UTILITIES CORP., 8805 18th Ave., Brooklyn 14, N. Y.—Booth 427.
In attendance: Jacob G. Goldberg, Julius S. Goldberg, Arthur A. Marcus, Joseph Bloom.
Exhibiting: "Radiant" oil burners, and featuring new sliding adjustable flange burner.

RALPH SUPPLY, INC., P. O. Box 188, Wadsworth, Ohio—Booth 611.
In attendance: Ralph T. Jenkins, Raymond G. Jenkins, Willard Ralph, F. R. Stumpf.
Exhibiting: Metal flues for gas and oil fired equipment; furnace fittings; registers; draft hoods.

RANDALL GRAPHITE BEARINGS, INC., 609 W. Lake St., Chicago 6, Ill.—Booth 219.
In attendance: M. E. Clark, W. E. Dickerson, E. C. Smith, Alan Dale.
Exhibiting: Self aligning pillow blocks, graphited bronze bearings, phosphor bronze bearings, cored and solid bronze barstock. New standard stock bronze bushings and cored and solid bronze bars will be featured.

RAY OIL BURNER CO., 401-499 Bernal Ave., San Francisco 12, Calif.—Booth 332.
In attendance: Russell C. Westover, Jr., George A. Martin, Carl J. Draper, Raymond B. Plass, Rudolph A. Rothe.
Exhibiting: Domestic oil burner (pressure type), combination gas oil burner (pressure type), combination gas oil burner (rotary type). The size 10 fully automatic rotary oil burner and a fully automatic rotary type combination gas-oil burner will be featured.

RCS TOOL SALES CORP., 25 N. Ottawa, Joliet, Ill.—Booth 829.
In attendance: Francis S. Russell, T. M. Sweeney, Dale D. Davis, Carl R. Longanecker, R. L. Stephenson, A. K. Stephenson.
Exhibiting: "Super-Saw", portable all purpose, and "Korner-King," right angle drill attachment, for roofing, warm air heating, electrical insulation, and other types of work.

READY-POWER CO., 11231 Freud Ave., Detroit 14, Mich.—Booth 363.
In attendance: H. D. Gumpper, W. S. Jewell, W. Wendt, J. C. Allingham.
Exhibiting: Engine-driven compressor unit for natural gas, 35 ton capacity.

REDMOND CO., INC., Owosso, Mich.—Booths 124-126.

REFRIGERATION APPLIANCES, INC., 923 W. Lake St., Chicago 7, Ill.—Booth 628.
In attendance: E. Niederer, Hugh D. Smart.
Exhibiting: Remote type central station air conditioning unit; remote type spot comfort cooler, ceiling suspended model; evaporative condenser. "Breez-E-Fex" remote type console model comfort cooler for multiple installations for hotels, tourist cabins, etc., for direct expansion coil or chilled water, will be featured.

REFRIGERATION ENGINEERING, INC., 7250 E. Slauson Ave., Los Angeles 22, Calif.—Booths 635-637-639-641.
In attendance: Harry Quinn, Dan D. Wile, Hy Jarvis.
Exhibiting: Air conditioning coil, vertical air conditioner, horizontal air conditioner, "Dri-Fan" cooling tower, "Dri-Fan" evaporative condenser, "Supreme" coil, water defrost coil.

REMINGTON AIR CONDITIONING, DIV. OF REMINGTON CORP., Cortland, N. Y.—Booth 265.
In attendance: Herbert L. Laube, E. A. Bonneville.
Exhibiting: Complete line of single room air conditioners, window models and consoles for a-c and d-c both air and water cooled, including new four-season models that heat as well as cool.

RESEARCH PRODUCTS CORP., 1015 E. Washington Ave., Madison 10, Wis.—Booth 438.
In attendance: C. B. Rowe, A. W. Brown, J. G. Schutz, J. P. Ashcraft, Les Tye.
Exhibiting: Replacement air filters, washable air filters, grease filters, holding frames, etc.

REYNOLDS METALS CO., 2500 S. Third St., Louisville 1, Ky.—Booths 214-216.
In attendance: Stuart Smith, H. N. Logsdon, D. L. Russell, O. N. Ashcraft, R. A. Castillo, L. E. Pennington, H. V. Menking, Geo. Perkins, R. W. Smith, H. D. Jones, D. F. Beard, R. W. Christensen.
Exhibiting: Aluminum air duct sections, diffusers, grilles, vents, vent hoods, dust collectors, furnace casings, heating and cooling coils, etc., fabricated in plain and embossed patterns.

RIC-WIL CO., 1052 Union Commerce Bldg., Cleveland 14, Ohio—Booth 403.
In attendance: M. A. Hanna, C. W. Wheeler, W. L. Bartel, E. A. Wert, H. W. Roskilly, E. S. Pandy.
Exhibiting: Prefabricated insulated piping for underground or overhead installation for all heating, cooling and power requirements, distribution of steam, hot or cold water, oil, process liquids, etc. Exhibit will feature over 100 ft of insulated piping to meet all requirements of heating and air conditioning: 1) "Hel-cor" insulated pipe units, 2) cast iron insulated pipe units, 3) "Foilclad" insulated pipe units for overhead lines.

RIDGE TOOL CO., 400 Clark St., Elyria, Ohio—Booths 448-450-452.
In attendance: R. C. Chamberlin, L. C. Richardson, R. D. Fye, W. L. Parcell.
Exhibiting: Pipe tools.

ROBERTSON CO., H. H., 2400 Farmers Bank Bldg., Pittsburgh 22, Pa.—Booths 120-122.
In attendance: Joseph J. Siddall, Harry H. Roberts, John E. Thoma, C. A. Pickett.
Exhibiting: Insulated exterior wall panels; ventilators; "Galbestos" roofing and siding.

ROYAL HEATERS, INC., 1024 Westminster Ave., Alhambra, Calif.—Booth 836.
In attendance: R. T. Lowrie, N. M. Landaiche, Lloyd Cody, Russell Smith, Atwood L. Fuller.
Exhibiting: "Jet-Flow" heating unit.

SARCO CO., INC.—see W. E. LEWIS & CO.

SCOVILL MFG. CO., P. O. Box 1820, Waterbury 91, Conn.—Booth 808.
In attendance: S. J. Lucas.
Exhibiting: "Uniflare" fittings, which will be displayed in connection with a typical refrigeration unit in full operation to demonstrate the "non-frosting" feature of the fittings, made in both brass and aluminum.

SERVEL, INC., 119 N. Morton Ave., Evansville 20, Ind.—Booth 469.
In attendance: J. A. Gilbreath, H. C. Pierce, Carl F. Schroeder, Carl A. Gruggel, W. J. Hoeing, David E. Young, R. E. Davis, W. K. Grube, D. M. Mayne, K. I. Wallace, Richard K. Graham, James M. Kennedy, E. G. Ploeger, W. F. Wright, Jr., Paul R. Williams, Urban H. Auslinger, T. C. Burdette, Robert C. Marbuch.
Exhibiting: "All-Year" air conditioner, featuring absorption type refrigeration unit.

SHEET METAL WORKER, 45 W. 45th St., New York 19, N. Y.—Booth 430.
Exhibiting: Publication.

SIEMON & CO., 3025 Main St., Kansas City 8, Mo.—Booth 241.
In attendance: R. H. Siemon, John Douglass, Chas. D. Jones, L. C. Tucker.
Exhibiting: "Combi-matic" gas and oil burners, and conversion gas burners, the gas-oil burner being designed to permit the addition of the gas burning attachment to any gun type oil burning installation and controlled to automatically change from gas firing to oil firing from outside temperature, or from interruption of gas supply.

SKIDMORE CORP., St. Joseph, Mich.—Booth 351.
In attendance: Vernon F. Radde, Gene Woods, John A. Ray, E. T. Gessell.
Exhibiting: Vacuum and boiler feed pumps; condensate and boiler feed pumps.

SMITH CORP., A. O., Milwaukee, Wis.—Booths 254-262.
In attendance: J. D. Kelly, J. E. Blanco, G. E. Kemper, G. H. Nichols, J. D. Kunz, W. L. Meicher, W. B. Kennemer, D. H. Rude, A. E. Butts, J. H. Brinker, L. M. Keating, J. Dilot, D. R. Neff, J. F. Donnelly, J. W. Long, J. B. Madden, J. P. Parker, M. B. Sawyer, Jr., J. J. Progress, Don Williams, Willard Manthei.
Exhibiting: Electric motors, water heaters, "Burkay" heaters, pumps, LPG tank. "Magic Heet" control will be featured.

SOUTHLAND SUPPLY CO., INC., 2034 Amelia St., Dallas, Tex.—Booth 364.
In attendance: B. V. Henegar, V. C. Kneese, J. M. Henegar, S. E. Knox, R. V. Lentz, E. C. Connor, A. Q. Roberts, C. A. Wagner.
Exhibiting: Products of Day & Night Div., Affiliated Gas Equipment Inc.; Kohler Co.; General Controls Co.; Minneapolis-Honeywell Regulator Co.

STEWART WARNER CORP., SOUTHWIND DIV., 1514 Drover St., Indianapolis, Ind.—Booth 270.
In attendance: W. E. Judd, W. J. Hawkins, H. W. Milner, A. F. H. Scott.
Exhibiting: "South Wind" and "Saf-Aire" heating equipment, featuring 1,000,000 Btu per hr input heater weighing 85 lb.

SUNDSTRAND MACHINE TOOL CO., Rockford, Ill.—Booth 415.
In attendance: C. W. Lang, L. H. Schuette, O. E. Mayfield, H. O. Wahlmark.
Exhibiting: Oil burner fuel units and pumps, featuring two stage and solenoid equipped units.

SURFACE COMBUSTION CORP., 2375 Dorr St., Toledo 1, Ohio—Booths 348-352-447-451-453.
In attendance: H. A. Gross, H. T. Gates, C. C. Owen, W. J. Grover, Max Tappero, W. R. Egan, F. S. Hamer, R. B. Thornburgh, R. E. Hollinshead, R. A. Bell, W. M. Adams, L. Surface, L. J. Monahan, L. W. Sutherland, C. B. Phillips, H. C. Gurney, C. H. Langendorf, P. deCoriolis.
Exhibiting: "Janitrol" winter air conditioner, gravity warm air furnace, cast iron hot water and steam boiler, triple service hot water system, unit heater, "Thermo-Attic" heater, duct heater, conversion burner. Duct heater with new "NBS A-19" coated heat exchanger, "non corrosive and impervious to condensation when used with summer air conditioning duct systems," will be featured.

TAL BENDER, INC., 417 N. Water St., Milwaukee 2, Wis.—Booth 828.
In attendance: E. T. Tal, E. Luprecht, W. R. Parker.
Exhibiting: Mechanical and hydraulic pipe and tube benders, featuring fast new hydraulic portable 4 in. bender and portable tube benders up to 2 in. for hard and soft copper, boiler tubing and any other tubing.

TANN CORP.—see CONGRESS DRIVES DIV.

TENNESSEE ENAMEL MFG. CO., 4104 Park Ave., Nashville 9, Tenn.—Booth 243.
In attendance: W. O. Wisner, Frank Drake.
Exhibiting: "Temco" gas space heaters and floor furnaces, the furnaces featuring shallow construction (25¾ in. depth), new burner with rustproof ceramic ports, and porcelain enamel heat chamber. Space heaters on exhibit will include a new automatic forced air circulator especially adaptable to basementless homes with concrete slab floor construction and second floor installation.

THERMOBLOC DIV., PRAT-DANIEL CORP., 84 S. Water St., East Port Chester, Conn.—Booth 224.
In attendance: E. M. Tarnoff, F. T. Bobbitt, J. V. Wolfe.
Exhibiting: No. 300 self-contained industrial direct fired industrial heating units, gas and oil fired.

TITUS MFG. CORP., 113 E. Eighth St., Waterloo, Ia.—Booth 318.
In attendance: Donald L. Titus, I. M. Galan.
Exhibiting: Complete line of "Airfoil" air conditioning outlets; outlet incorporating a four-way directional grille and a volume controller, primarily designed for use on systems where the duct work is exposed in the space conditioned, will be featured.

TORRINGTON MFG. CO., 70 Franklin St., Torrington, Conn.—Booth 208.

TRIMONT MFG. CO., DIV. OF AETNA INDUSTRIAL CORP., 55 Amory St., Roxbury 19 (Boston), Mass.—Booth 818.
In attendance: James Ragsdale, Joseph Ballem.
Exhibiting: "Trimo" and "Roxco" heavy duty, and "Popular" Stillson normal duty pipe wrenches, "Trimo" monkey wrenches, pipe vises, pipe and tube cutters, strap wrenches. A moving mechanical man operating new and improved pipe wrench will be featured.

TRION, INC., 1000 Island Ave., McKees Rocks, Pittsburgh, Pa.—Booth 239.

TUTTLE & BAILEY, INC., Corbin Ave., New Britain, Conn.—Booth 311.
In attendance: R. D. Tutt, R. S. Rickalaugh, J. H. Smart, J. R. Dowdell.
Exhibiting: Ceiling diffusers, grilles, registers and air control devices for heating, ventilating and air conditioning installations; copper convectors for steam and hot water systems.

TYPHOON AIR CONDITIONING CO., INC., 794 Union St., Brooklyn 15, N. Y.—Booths 623-625.
In attendance: James F. Dailey, Edward L. Garfield, Don V. Petrone, Murray M. Kabili, Alfred E. Weber, Richard E. Cherry, P. E. Carter, Edward Beck, Peter T. Wootton.
Exhibiting: Free-standing air conditioning units: 3 ton, 7½ ton, 10 ton, and 20 ton; evaporative condensers: 8 ton and 20 ton; high side: 7½ ton; water cooled condenser: 5 ton; two row heating coil.

UNITED ELECTRIC SERVICE CO., 1100 Scott Ave., Wichita Falls, Tex.—Booth 425.
In attendance: Sydney A. Gaines, Chas. D. Morrison, Thomas E. Dean.
Exhibiting: "Magic-Aire" evaporative cooling units.

UNITED STATES AIR CONDITIONING CORP., Como Ave. S. E. at 33rd St., Minneapolis 14, Minn.—Booth 819.
In attendance: A. A. Feinberg, L. P. Hanson, D. E. Feinberg, R. M. Dawson, A. G. Pabst, J. D. Higgins, D. R. Groth, M. A. Stuart.
Exhibiting: New 5 ton refrigerated "Kooler-aire" unit, new 5 ton upright store conditioner, 1500 cfm "De-Hu-Matic" evaporative cooler, "usAIRco" gas-fired unit heater, "Modu-aire" unit, exhauster, new turbo blower, new belted vent set. The evaporative cooler features a valve which automatically regulates evaporation through atmospheric control, "making universal application of evaporative cooling possible and profitable."

UNITED STATES RADIATOR CORP., 300 Buhl Bldg., Detroit 26, Mich.—Booths 429-431 (see also Pacific Boiler Div.)
In attendance: W. J. Peoples, J. R. Knox, A. F. Westerfield, M. L. Judd, T. F. Gessner.
Exhibiting: Boilers, radiators, controls and heating accessories, and featuring radiant baseboard.

UTILITY APPLIANCE CORP., 4851 S. Alameda St., Los Angeles 11, Calif.—Booth 807.
In attendance: Howard M. Canterbury, Bernard Harris, Herb Leo.
Exhibiting: Forced air furnaces, unit heaters, built-in circulating wall heaters, evaporative air coolers, all-year conditioner, with guaranteed heating performance.

VERSON MFG. CO., Holmes St. at Ledbetter Dr., P. O. Box 9128, Dallas, Tex.—Booth 618.

In attendance: Leon J. Krysinski, Ralph E. Verson, Lee Roy Long, Harold Verson.

Exhibiting: Metal stamping samples, press brake, miniature mechanical and hydraulic presses, sample forming and draw dies. Displays of transfer feed press items and modern metal fabricating methods will be featured.

VIKING MFG. CORP., 1747 Chester Ave., Cleveland 14, Ohio—Booth 347.

In attendance: H. S. Frasher, P. B. Patton, L. J. Morefield, A. F. H. Scott.

Exhibiting: Packaged air conditioning, window type air conditioner, gas winter air conditioner, gas water heater, "Flatpak" aluminum ductwork, and featuring complete new line of packaged air conditioning, from 3 to 20 hp units, including cooling towers and evaporative condensers.

VULCAN RADIATOR CO., 26 Francis Ave., Hartford 6, Conn.—Booths 320-322.

In attendance: Thomas L. Arnold, John H. Ehn, Richard B. Sweet, Josh Dowdell.

Exhibiting: Extended fin surface, ferrous and non ferrous; baseboard radiation; grille covers for radiation. New "FSF" baseboard cover and new copper radiator with aluminum fins will be featured.

WATERMAN-WATERBURY CO., 1121 Jackson St. N. E., Minneapolis 13, Minn.—Booth 244.

In attendance: H. G. Cross, Paul E. Cross, Ben O. Schwarz, David Sedgwick, Stewart Smith, J. D. White, Everett Borst, Brighton Eddy, Ted Doering, Wm. Morrisey, F. W. Legler, Otto Griefnov, James Bazille, Frank McConnell.

Exhibiting: Winter air conditioning equipment consisting of gas, oil and coal fired furnaces.

WEBSTER ELECTRIC CO., 1900 Clark St., Racine, Wis.—Booth 229.

In attendance: Louis Ehrich, Ben Wiechers, D. J. Monroe, W. E. Dent, P. G. Crewe.

Exhibiting: Fuel units, ignition transformers, and "Thermodrive" forced warm air control, the latter being a comparatively new item that ties in particularly well with the current interest in C.A.C. (controlled air circulation).

WEBSTER ENGINEERING CO., 419 W. Second St., P. O. Box 2168, Tulsa 1, Okla.—Booths 455-457.

In attendance: G. C. Bergtholdt, H. A. Macfarline, J. C. Wallis, W. D. Charles, L. S. Reagan.

Exhibiting: Gas burners, electronic combustion safeguard system, automatic combustion controls. "Dynetic" forced draft conversion burners for high capacities with minimum size and lower gas pressure will be shown in public for first time.

WEIL-McLAIN CO., Michigan City, Ind.—Booth 250.

In attendance: W. R. Stockwell, E. R. Westphal, R. M. Stockwell, N. E. Westphal, R. A. Kuntz.

Exhibiting: Gas boiler, oil heating unit, "Solray" radiation, "Raydiant" radiation.

WESTINGHOUSE ELECTRIC CORP., 511 Wood St., P. O. Box 868, Pittsburgh 30, Pa.—Booth 725.

WHITE-RODGERS ELECTRIC CO., 1209 Cass Ave., St. Louis 6, Mo.—Booth 606.

In attendance: J. A. Rodgers, Jack Searls, E. C. Robinson, D. O. Eggert, Jack Barnes, A. Keane, J. Borah, Louis Close, H. Teasley.

Exhibiting: Controls for heating and air conditioning.

WORTHINGTON PUMP & MACHINERY CORP., Harrison, N. J.—Booths 312-314-411-413.

In attendance: C. E. Wilson, M. M. Lawler, W. F. Bishop, E. R. Michel, F. J. Watt, D. H. McCuaig, B. T. LaPierre, E. C. Hamilton, S. R. Hirsch, J. Neulhoff, C. C. Crawford, R. P. Lockett, J. E. Viguerie, G. R. Hammett, R. E. Newlin, W. B. Gregory, D. Williams, E. T. Keck, Jr., L. C. Duncan, J. E. Montgomery, E. J. Salaun, C. S. Rudkoff.

Exhibiting: 50 ton capacity "Freon-12" refrigeration compressor, cutaway model: evaporative condenser; new 1950 model 5 ton package air conditioner; 25 ton capacity "Freon-12" condensing unit; three cylinder, 5 ton "Freon-12" hermetic compressor unit for package air conditioners; four row direct expansion coil for air conditioning units; 3 in. x 3 in. ammonia condensing unit; centrifugal refrigeration compressor for air conditioning systems; room air conditioning unit for large air conditioning systems.

YARNALL-WARING CO., Chestnut Hill, Philadelphia 18, Pa.—Booth 802.

In attendance: Leland C. Campbell, J. Macy.

Exhibiting: Seatless blowoff valves; "Gun-Pakt" expansion joint working model showing method of inserting plastic packing while joint is under line pressure; involute spray nozzles for air conditioning; impulse steam traps; strainers; "Hi-Lo" water column and "Sesure" gage; remote water level indicator for eye level readings.

YORK CORP., York, Pa.—Booths 736-740.

In attendance: J. R. Hertzler, L. P. Quinlivan, H. W. Broadwell, F. D. Graham, R. P. James, W. R. McGinnis, C. H. McLeod, J. F. Moss, R. S. Sandifer, H. Z. Thomas, C. W. Lane, A. C. Leske, Jr., A. C. Edwards, Leon E. Kinley.

Exhibiting: Latest developments in air conditioning and refrigeration systems and featuring a "Turbo" (centrifugal) compressor.

ZINK CO., JOHN, 4401 S. Peoria, Tulsa, Okla.—Booth 609.

In attendance: Walter J. Combs.

Exhibiting: Floor furnaces, unit heaters, wall heaters, and burners.

ZONE HEAT REGULATOR CO., Box 188, Garrettsville, Ohio—Booth 412.

Quick Picture

ASHVE MEETING

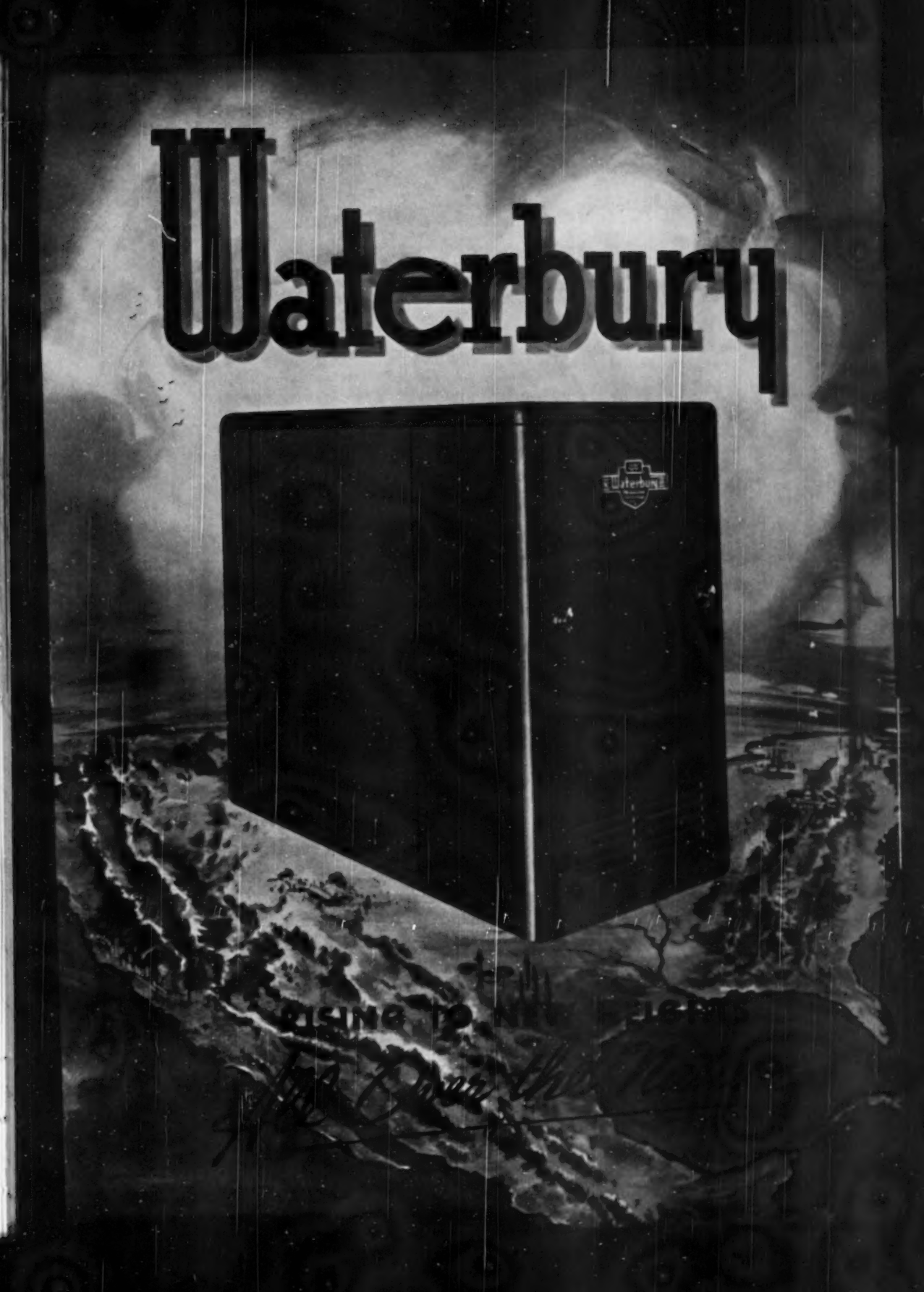
At the Hotel Adolphus and the Baker Hotel, Dallas, with registration starting at 10 a.m., Sunday, January 22, on the mezzanine of the Baker. First session 9:30 a.m. Monday (Baker), second session 9:30 a.m. Tuesday (Adolphus), third session 9:30 a.m. Wednesday (Adolphus), fourth session 2:00 p.m. Wednesday (Adolphus), last session 10 a.m. Thursday (Adolphus). See program for further information.

EXPOSITION

Opens Monday, January 23, at 2 p.m., and daily Tuesday through Friday, 12 noon to 10 p.m., in the Hall of Agriculture and the Poultry Building at State Fair Park, Dallas. See list of exhibitors and diagrams of exhibit buildings for full information on "who, what and where."

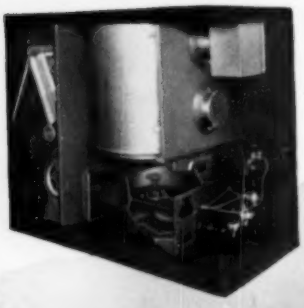
ENTERTAINMENT

Ladies get-together, Sunday, 2:30 p.m. (Baker); ladies assembly, Monday, 10:30 a.m. (Baker); welcome luncheon, Monday, 12:30 p.m. (Adolphus); chuck wagon dinner, entertainment and dancing, Monday, 7 p.m.; luncheon meeting, Tuesday, 12:30 p.m. (Adolphus); ladies luncheon and style show, Tuesday, 12:30 p.m. (Baker); ladies theater party, Wednesday, 1:45 p.m. (leaving from Baker); annual banquet, Wednesday, 7 p.m. (Baker).


Waterbury
Waterbury
RISING TO NEW HEIGHTS

All Over the Nation

DISTRIBUTORS enjoy territory and distribution rights—close factory relationship—and the advantage of a complete line of quality heating equipment.



6400 Series
Air Conditioner

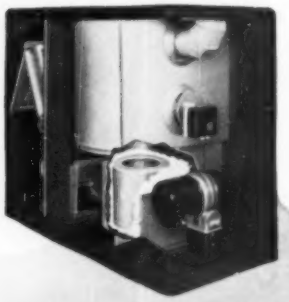
LISTED

The 6400 Series

Gas-Fired Air Conditioner

The last word in gas-fired winter air-conditioners. This truly modern unit is engineered for economy of operation and to provide the utmost in home heating comfort. Equipped with the latest in efficient gas burners and beautifully styled to meet the demands of your most discriminating customers.

8 sizes . . . . . 60,000 to 240,000 BTU input



6300 Series
Air Conditioner

The 6300 Series

Oil-Fired Air Conditioner

Completely automatic oil heat—filtered, humidified air—under an all-modern streamlined casing. Easy access to all parts. Casing is designed so that it may be placed in any position in the basement. Here is real heating comfort for those customers who prefer to burn oil. Equipped with the Master Blowertrol.

6 sizes . . . . . 75,000 to 145,000 BTU input

1300 Series
Air Conditioner

The 1300 Series

The aristocrat of the Waterbury line. This product of Waterbury's precision engineering is designed especially for oil. A size to fit the medium-size home on up to the largest home—a unit that can be installed with confidence whatever the heating requirement.

Models with ½ h.p. or smaller blower motors are equipped with Master Blowertrol.

9 sizes . . . . . 164,177 to 437,805 BTU input

Waterbury
The Waterman Waterbury Co.
Minneapolis

"It's What's Under the Casing that Counts!"

DEALERS are finding they have a *complete* line to satisfy *all* their prospects —a growing line backed by distributor and manufacturer alike.

USERS have come to realize that quality means satisfaction. They have confidence in the name Waterbury and in the dealer who installed their unit.

The Waterbury Hi-Boy

For Gas, Oil and Q Series Oil

A complete winter air conditioner with a real economy of space. The Hi-boy is ideal for homes without basements, or with small or part basements. Its compact casing houses an all-steel, welded, gas tight heat exchanger and a quiet, efficient blower to circulate filtered air. Gun-type or vaporizing oil burner—or gas burner.

Equipped with Master Blowertrol.

4 sizes . . . . . 60,000 to 150,000 BTU input

The Waterbury Gravity Furnace

For Gas, Oil and Q Series Oil

Waterbury has produced, in their gravity line, a furnace combining the beauty and durability of their air conditioners—with the economy of a gravity unit. The same efficient Waterbury burners are used—the gun-type or vaporizing oil burners and the Waterbury gas burner.

3 sizes . . . . . 60,000 to 130,000 BTU input

A100 Series Air Conditioner

The A100 Series

Coal-Fired Air Conditioner

Waterbury's new and improved coal-fired line offers to the homeowner the greatest economy both in original cost and in operation. The many new features in this unit add up to greater heating efficiency and a completely modern design. Easily converted to gas, oil or stoker.

8 sizes . . . . . 95,400 to 153,000 BTU input

Over 42 Years of Warm Air Heating

Waterbury

Form No. 1948 12-49 Printed in U.S.A.

Waterburg

Q4300 Series Air Conditioner

Q4300 Series

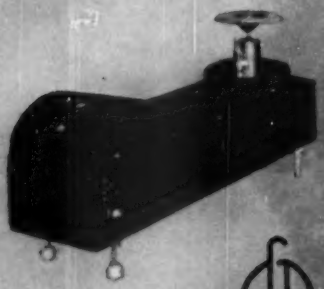
This latest addition to the Waterbury line is available as an air conditioner, Hi-boy and gravity furnace. The Q4300 series is low cost and competitive, yet has the same gauge steel body, efficient vaporizing burner and precision engineering of other Waterbury units.

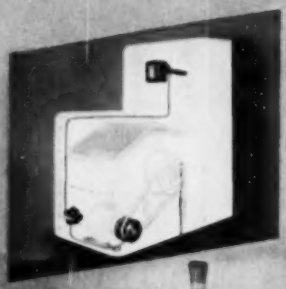
1 size. . . . . 75,000 BTU input

G200 Gas Conversion Burner

A new and improved model using the same efficient new model burner found in all Waterbury gas-fired units. Attractive—compact—safe—this burner provides automatic gas heat for those homes with a good heating plant already installed.

1 size . . . . . 200,000 BTU input





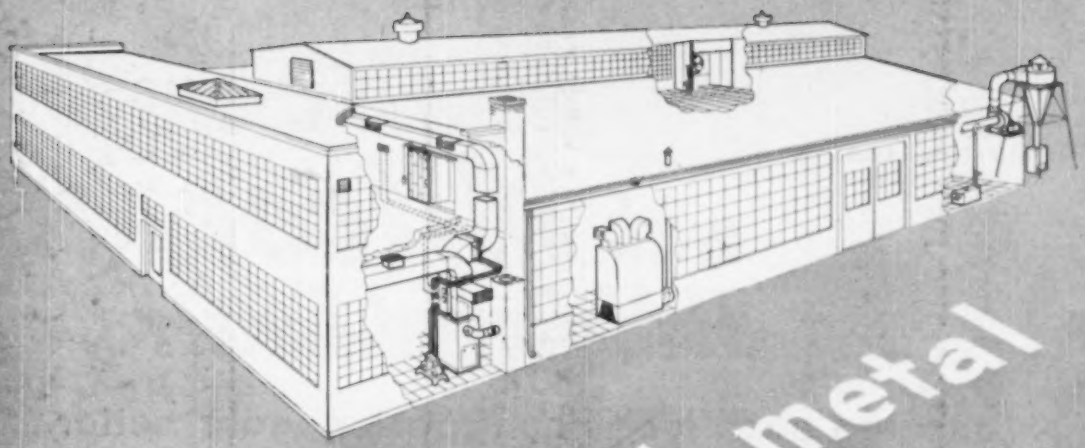
The Master Blowertrol

We are convinced that this is the best means of achieving true continuous blower operation—it means more satisfied customers—the end of stratification and "Cold 70"—combined with precision-engineered Waterbury Air Conditioners it is modern perfection in warm air heating.

Waterman Waterbury Co.

1121 JACKSON STREET, N. E. • MINNEAPOLIS 13, MINN.

Remember Waterbury WE DO NOT MAKE A HEATING UNIT UNDER ANY OTHER NAME!



sheet metal *Section*

DESIGN · FABRICATION · INSTALLATION
OF SHEET METAL PRODUCTS

Hemmed Inner Edge
— safer, stronger

Perfectly Rounded Shape
— easier, faster erection

Correctly Formed Bead
stays straight and true

You profit more with Milcor Half-Round Gutter

...because each job is hung faster, looks better, and brings more business your way

Jobs go up in a hurry with Milcor Half-Round Gutter. The time you save puts profits in your pockets — and lets you handle *more* jobs.

You're sure to get more jobs, too. The trim, permanent good looks of your Milcor jobs build the kind of reputation that keeps business coming your way.

Here are exclusive Milcor features that make this gutter first choice with hundreds of sheet-metal men:

Hemmed Inner Edge adds toughness and rigidity; eliminates sharp edges.

Perfectly Rounded Shape is uniform in all accessories, for quick assembly and permanent, snug-tight joints.

Correctly Formed Bead is rolled, for extra strength which prevents sagging after the job is hung.

Milcor Half-Round Gutter comes with lap-joints or slip-joints, perfect-fit mitres, and other accessories to simplify on-the-job assembly. Try Milcor Half-Round Gutter. See for yourself why you should use it on every job. Send for complete information today.

INLAND STEEL PRODUCTS COMPANY

FORMERLY MILCOR STEEL COMPANY

MILWAUKEE 1, WISCONSIN

BALTIMORE 24, MD. • BUFFALO 11, N. Y. • CHICAGO 9, ILL. • CINCINNATI 25, OHIO • CLEVELAND 14, OHIO • DETROIT 2, MICH. • KANSAS CITY 8, MO. • LOS ANGELES 23, CALIF. NEW YORK 22, N. Y. • ROCHESTER 9, N. Y. • ST. LOUIS 10, MO.

FREE—complete catalog

of Milcor Half-Round Gutter line and other Milcor rain-carrying equipment

Tear out this coupon and mail **TODAY!**

Inland Steel Products Company, Milwaukee 4, Wisconsin

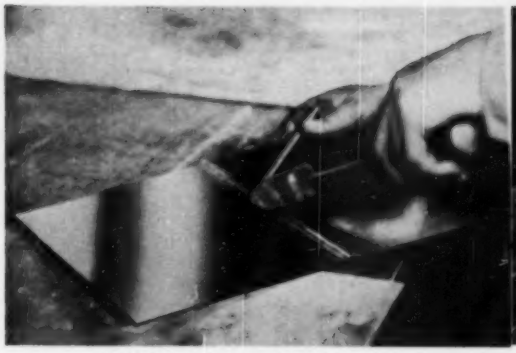
Please send me Your FREE Milcor Catalog of Rain-Carrying Equipment.

Name .....

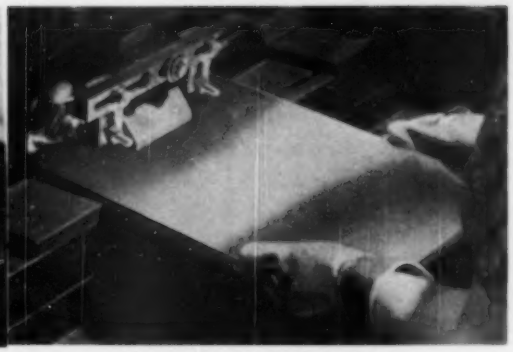
Company .....

Company Address .....

City ..... (.....) State .....



Soldering is easily accomplished with the use of paste flux.



These metals can be handled in the sheet metal tools all shops possess.

Pre-Plated Metals Offer Beauty Ease of Fabrication

CARL C. STRUEVER
American Nickeloid Company

EVERY day more sheet metal contractors are finding more use and a wider range of applications for pre-plated metals. In work calling for a careful balance of durability and eye appeal, the sheet metal trade has come to rely on this wider range of patterns, finishes and gauges. Basically, it's the new look applied to commerce and industry which, in pre-plated metals, is delivered with tailor-made attraction and durability.

Variety of these metals is shown by the fact that production includes sheets and coils in base metals of brass, zinc, copper, steel and aluminum. Choice of plating includes: nickel, chrome, brass, copper and gold bond. Add to this bright or satin finish plus Tint-Metal (metals in color)—in a variety of stripes, crimps and corrugated patterns—and it's easy to understand the sales appeal which pre-plated metals can bring to practically every type of application.

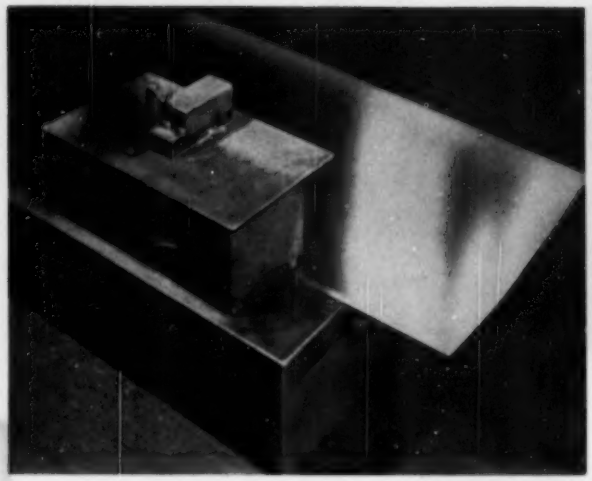
Ease of Fabrication

No less dramatic than eye appeal is ease of fabrication. The response of pre-plated metals to soldering, riveting, blanking, drawing, bending, forming, spot-welding, and seaming is added justification for their widespread use. However, people who work with pre-finished metals recognize they are handling a part of the *finished* product. They show care in choice of proper metal, in making and handling of dies, proper lubrication, and cleanliness of die equipment.

Of particular interest to sheet metal contractors is the ease of, and recommended practices for, fitting pre-plated metals into present fabrication methods. Following are production practices suggested by one manufacturer to customers. These same suggestions and capacities may be applied to the application of any quality pre-plated metals having similar specifications.

Soldering. Successful soldering of pre-plated metals can be accomplished with the use of paste flux, so as to avoid flux splatter from contact with hot iron. No difficulty arises from soldering metals with copper, brass, or nickel finish. Copper and brass finishes, however, should not be soldered if lacquered until lacquer has been removed with thinner from soldering area. To solder a chrome plated surface, chrome should first be removed from soldering area with a sharp tool or muriatic acid. Acid will take about one minute to dissolve the chrome, then should be washed off, the metal dried, and a paste flux applied for soldering. An iron should be used just hot enough to make solder flow freely.

Riveting. Pre-plated metals may be riveted with the same ease as unplated metals. Care should be taken that the hammer blow does not mar the surface. Cold riveting, wherever possible, is preferred to hot riveting to protect plated surface from oxidizing.

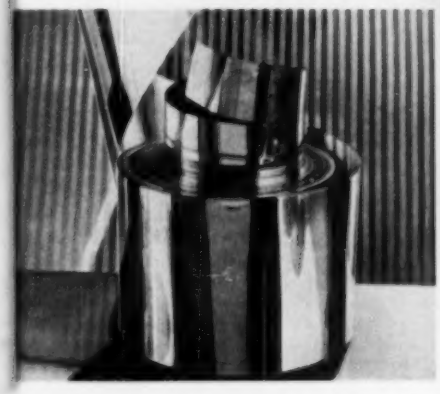


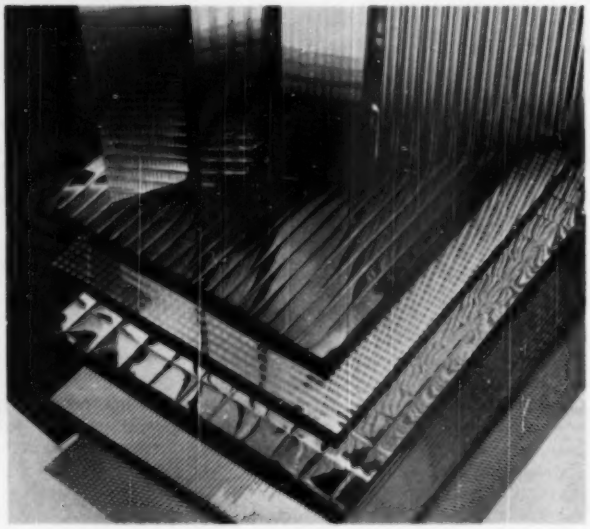
Spot welding is frequently used in joining such metals.

The many designs available point the way to decorative uses of pre-plated material.

Ease of fabrication makes pre-plated metals popular for many products.

Coils of the metal make possible high speed production.





Blanking. Slightly more care should be exercised in blanking pre-plated metals than plain metals to protect high finish. Tools, dies, etc., should be frequently checked to eliminate rough edges. Careful lubrication is suggested: Lightly swabbing the punch with oil, and idling the press a few strokes to lubricate die. Suggested lubrication is three parts SAE 20 oil to one part of kerosene. Chromium plating the die does not increase die-life; it is better to use best grade of steel and sharpen when necessary.

Drawing. Elongation of the metal in this operation involves distortion of the grain structure of the base metal and likewise distortion to a certain extent of the plated surface. If the amount of draw is enough to cause an orange peel effect on the unplated metal, it will cause the same effect on plated metal. The finish will be slightly dulled. A nickel or chromium plated metal adds about 10 per cent to the tensile strength of the base metal and reduces ductility about the same amount. On a mechanical motion press, plated steel is ordinarily fabricated at speeds slower than brass, copper or zinc. Actual tests have demonstrated that deep drawn or deep embossed parts can be made successfully on a hydraulic press when the metal would fracture on a mechanical-motion press. Lubrication is important. The metal should receive a fairly uniform coating of oil, otherwise undue breakage will result on parts insufficiently oiled.

Bending. Again, follow good shop practices and no difficulties will arise. Frequent inspection of tools and fabricating machines should be made to remove nicks, rough edges. As bending is commonly associated with sheet metal fabrication, a generous radius is recommended to prevent undue distortion at the bent edge.

Forming. Forming pre-plated metals is usually per-

formed with press equipment. This operation on punch press equipment usually involves no elongation of the metal. Sharp nicks, rough edges, should be removed from tools. Chrome plating here is beneficial and will increase tool life. Special bronze dies have also been found effective. Since plated metal has more spring-back than non-plated metal, allowance should be made in aligning dies. Keep radius of angles as large as possible to minimize distortion. Generally, a ferrous metal is fabricated at slower speed than a non-ferrous metal. Lubrication depends on the work. Where none is needed, cleaning is eliminated.

Welding. Spot welding is the only practical welding method for pre-plated metals. Heat resulting from gas or flame welding destroys the plated surface. The spot welder should have accurate current and automatic time control. Polished alloy tips are recommended and, if possible should be water cooled. Proper current, pressure and time setting will produce a weld free of visible oxidation around the welding point.

Seaming. As most pre-plated metals are seamed like other metals, the general rules for bending apply here. For side-locked seams the thick edge machines should be used instead of the burring machine, since the wheels of the latter are too sharp and often have a tendency to cut the metal. In forming a wired edge, a radius approximately the same as the radius of the wire should be used.

In many of the foregoing fabrication methods, a protective coating made available by suppliers will preserve the finish on pre-plated metals. One coating available, for example, permits working the metals under severe conditions. This type of coating is supplied in two forms: Either as a pressure sensitive paper adhered to the metal by special gum, or as a stripping type of plastic film. Coils are protected by paper interleaving.

This steadily increased usage of pre-plated metals is evidenced today in literally thousands of products and applications where both function and beauty have been greatly enhanced. With little more than ordinary care used in good shop practice, these metals have cut down costly production in manufacturing, and greatly added to the appeal in sheet metal applications.

New Use for Aluminum

A NEW USE FOR ALUMINUM, which has already consumed millions of pounds of the metal, has been developed as a result of the Government's emergency grain storage program.

This new use is for the fabrication of 28,466 gigantic grain bins. Veritable cities of these round, square and oval shaped structures have sprung up all over the middle west to house the bulging bushels of corn from this year's crop. A total of 21,500,000 lb of aluminum has been supplied for the manufacture of the grain bins for the CCC.

The metal has been used in hundreds of Alumidromes 36 ft wide and 96 ft long with a capacity of 35,000 bushels each; and for thousands of bins, both round and square, with a capacity of 3,000 bushels each.

The CCC program has brought about the largest use of aluminum for farm storage in the history of the industry. The overall program sought storage for 500 million bushels of corn. According to the CCC, the grain bins have been delivered to Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Washington.

Round bins being erected

Pattern Development for

Gravity Weather Cap

HUGH B. REID
Detroit, Michigan

IN THE June 1949 issue of AMERICAN ARTISAN there appeared a series of six suggestions for the design of a gravity weather cap; here is a simplified method of layout for further consideration and comment.

On an isolated job where only one cap is required, any design within reason would be acceptable, but in industrial work where there may be as many as fifty stacks on the same building roof one could readily imagine the confusion that would be presented unless some standard was adhered to. In analyzing the layout problem involved we note from the plan that the stack and cap have a common center point. The front view shows that the stack and cap are symmetrical about the center line. From the preceding facts we conclude that all the drawing necessary to lay out the cap, stack, supports and necessary holes for erection is one half of the front view.

Following is a step by step solution of the problem.

First Step:

Draw the half front view as follows:

(a) Draw the center line, from center line measure off half the stack diameter and draw a line. Establish height *G* and draw lines marked *W* and *X* indicating the top and bottom of the stack.
From the top of the stack measure off half the stack diameter above the line (See C in proposed standard). Next measure off stiffener edge distance, and draw lines marked *Y* and *Z*. From the center line, on line *Z*, measure off twice the radius of the stack (See B in proposed standard). From point *O* draw a line at 30 deg to line *Z*, intersecting the center line at *L*.

(b) With point *O* as center and line *Z* as radius swing an arc to intersect 30 deg line as indicated by *R-1*. The intersection of arc *R-1* and 30 deg line will establish distance D.

Second Step:

Lay out the cap pattern as follows:

Set a compass or trammel at distance *O* to *L* as indicated by *R-2*, and draw a circle. From center point *O'* draw a line to intersect circumference line as indicated by *R-2'* and marked work line *1*.

Set a divider to distance *D* and from intersection of work line *1* and circumference line, step off six and one quarter times distance D as shown (see note). From this point draw a line to point *O'*. Add lap and lay out holes as indicated.

To lay out holes for the supports, divide the circumference line into eight equal spaces and draw lines from *O'* to points *2, 4, 6* and *8*. Next, take radii *R-3* and *R-4* (shown on front view) and draw long arcs to intersect lines *2, 4, 6* and *8*. The holes will fall on the intersection of the lines and the arcs. Add stiffener edge allowance to complete cap pattern.

Third Step:

The layout for the stack will be determined:

(a) By first drawing two lines at right angles. On the vertical line mark off distance *G* and on the horizontal line mark off the circumference of the stack which is found by multiplying the diameter by the constant 3.14.

(b) To lay out the holes for the supports divide the circumference into eight equal spaces and through points *2', 4', 6'*, and *8'* draw lines perpendicular to circumference line.

(c) Transfer distances *E* and *F* from simplified method drawing to lines as shown.

(d) Add allowance for seam and roll to given diameter.

Fourth Step:

To lay out the cap supports:

(a) Add the distance *H-J-K* and cut the number of supports required to this measurement.

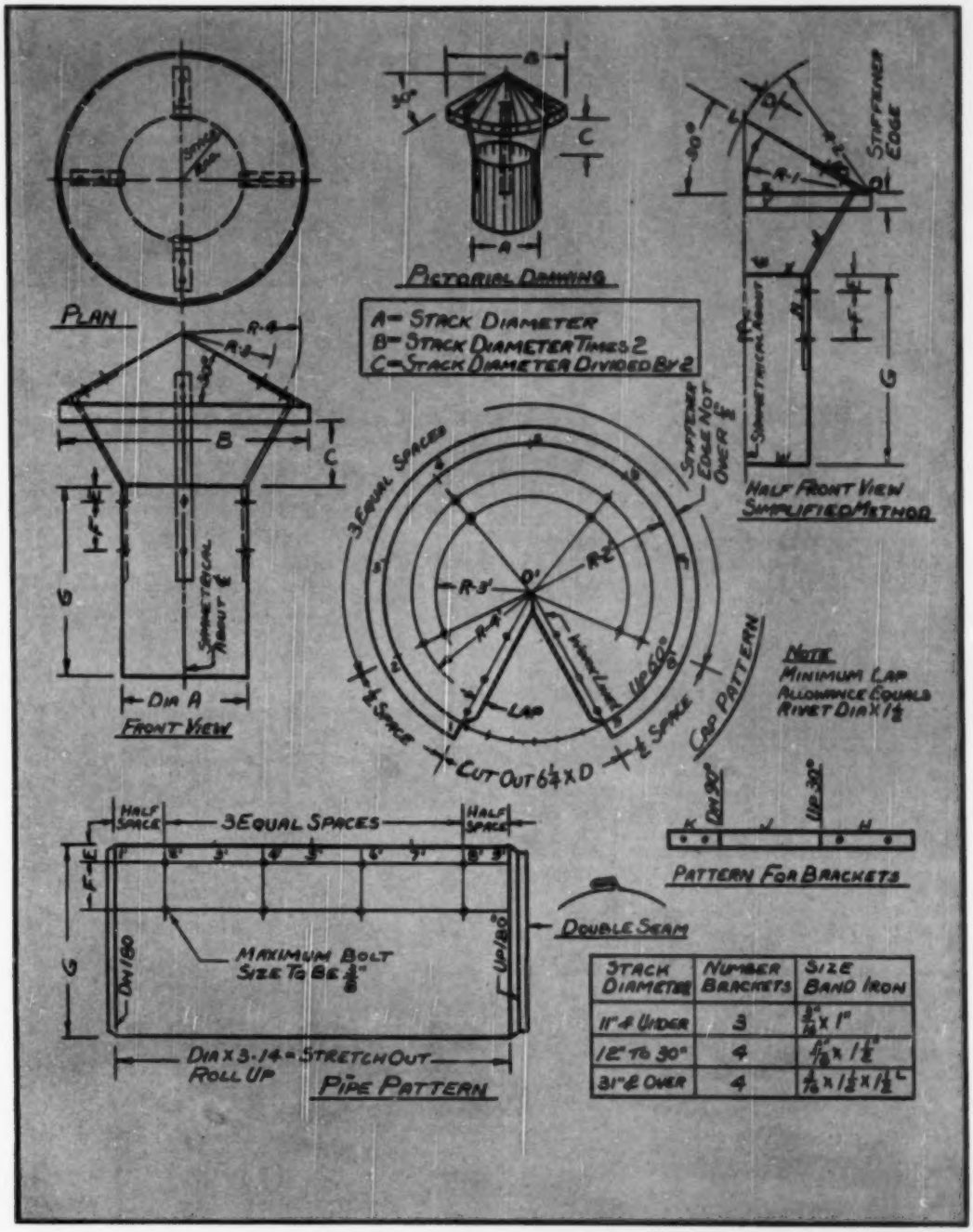
(b) Mark out the brake lines and holes on one support only and lay this pattern on a bench. Line the remainder up and by the use of a square transfer the necessary layout marks to the remainder of the supports required.

(c) Punch all holes and brake to coincide with bracket outline as shown on short method drawing. This completes the problem.

There are two similar weather caps, one of which is used for air being exhausted under low pressure, the other is used on venturi stacks where air is handled under high pressure. These caps are interesting problems and will be discussed in future articles.

Note: The $6\frac{1}{4} \times$ D distance is arrived at by the following calculation. To find the cutout mathematically the formula would be radius of 30 deg line (marked *R-2*) times 6.28 minus radius at line *Z* (marked *R-1*) times 6.28 or $R\text{-}2 \times 6.28 - R\text{-}1 \times 6.28$ equals cutout. 6.28 is .03 over $6\frac{1}{4}$, so $6\frac{1}{4}$ is adequate for sheet metal work. To eliminate lengthy mathematical calculations simply set the divider at Distance *D*. step off six spaces, add $\frac{1}{4}$ space and the result is the amount to be cut out.

Sheet Metal Pattern



STACK DIAMETER	NUMBER BRACKETS	SIZE BAND IRON
11" & UNDER	3	5/16" X 1"
12" TO 30"	4	1/8" X 1½"
31" & OVER	4	1/16" X 1½" X 1½" L

Gravity Weather Cap – Hugh B. Reid

An attractive checkerboard pattern was used for the window base on this store front.

Cross-braking produces the quilted pattern shown here.

Stainless Steel Fabrication No Special Equipment Needed

Many outdoor canopies are decorated with designs such as the diamond on this jewelry store.

Two spotlights located overhead effectively light the stainless steel letters of the sign.

LAWRENCE E. GICHNER
Washington, D. C.

ANY shop equipped with shears and a brake can fabricate stainless steel. Only one precaution is necessary when handling the polished sheet and that is the element of *care*. When working galvanized steel and copper, scratches are not too detracting a factor, but in stainless steel the very reverse is true. A small dent or mar quickly attracts the eye and can turn a thing of beauty into a ruin.

With a little expense this necessity for skillful handling can be mastered. We mention this, not as a danger signal to avoid attempting stainless steel fabrication, but as an important guide post to successful accomplishment.

Brake Reserved for Stainless Steel

Some shops, when they find business warrants the outlay will purchase a brake just for forming stainless steel. General utility brakes on which galvanized steel has been bent, all too frequently have nicks from hammer blows and clamping over seams that leave a wrinkle in the bright metal when it is bent in the same machine.

Others find that scratches develop while working the metal on the work bench. Slivers of steel become wedged in wood table tops and when the new sheet is moved over them, scratches mar the surface. Several

methods are used to avoid this hazard:

1. A special bench is set aside just for stainless steel.
2. A bench is covered with felt to cushion the metal. This felt is procurable from glaziers' supply houses.
3. Where space is at a premium and no one bench can be put aside, a separate plywood board is covered with felt and put on the bench when needed and set aside when not.

No Expensive Equipment

Let those who want to work stainless steel keep this in mind—no expensive special equipment is necessary or used. Those who wish to make cut-out letters will find the aid of a bandsaw helpful. The bandsaw is of benefit in avoiding the slight wave that occurs when stainless steel is cut with hand shears.

Those with special problems will find the manufacturers anxious to be of help with prepared pamphlets. In addition there are trained members of their technical staffs who will personally review and recommend.

Stainless steel can be soldered and welded as readily as any other metal. Many types of abrasive wheels are on the market for grinding and smoothing the welding seams. The present trend today is to avoid both welding and solder on store fronts and instead use a gauge of sufficient rigidity that butting the metal makes a satisfactory installation.

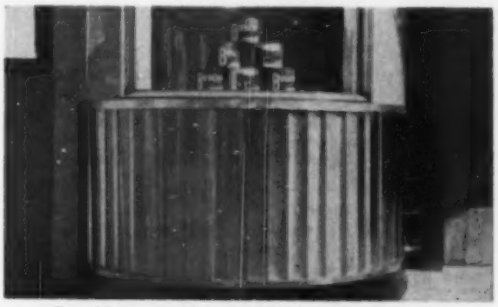
Profits Are Waiting

The sheet metal contractor who decides to attempt fabricating stainless steel will find many a profitable dollar his reward. A little originality in design will help a great deal. Today both architects and building owners are seeking that little something that is different, that will attract attention and give distinction to their property. The answer definitely lies in stainless steel.

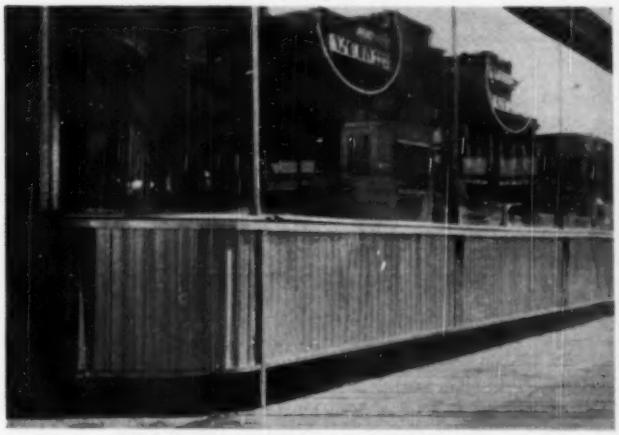
Business indexes indicate that some firms are doing from 13 per cent to 17 per cent less volume than last year. Many a sheet metal contractor can boost his sales volume to make up this difference by using stainless steel.

Fluted glass panels provide soft light for the under side of this canopy.

A sunburst pattern is easily produced and pleases the eye of the passerby.



Curved base sets off the small display with considerable emphasis.



Fluted stainless steel ties store front together over its full length.

As an ornament a peach was hammered out of stainless steel for this front.

Metal Action in Braking

ERNEST E. ZIDECK
Sheet Metal Consulting Engineer

Stresses and strains induced by processing sheet metal can cause variations in results which upset layout calculations. It is necessary to take the behaviour of metal into account when planning fabrication of products. This article analyzes bending and its effects.

WHEN processing light gauge metal sheets in a brake, the stretch-out is normally figured by computation of the respective thicknesses of metal and additions necessary for a lap or seam. Standard brake adjustment for this work is for the common bend, which is obtained by setting the point of the descending die to produce an inside radius the thickness of the metal, at the bend. On the common brake this is accomplished by setting the point of the blade (over which the metal bends) one metal thickness back from the edge of the solid bar. These are called congested bends, as the metal is being congested between dies or blades, without any compression or air bending.

Bend Characteristics

In accompanying sketches we show what is meant by three kinds of bends: a) congested bend; b) compressed bend; c) air bend. When working light gauge metal with the same stretchout for each joint and each joint braked with the same adjustment, uniform results are achieved. The joints fit together and facilitate assembly and installation. But, even here, should the brake adjustment vary we shall experience discrepancies which necessitate hammering the corners; and, if cleats are used to hold the joints, the corners will not fit correctly. In heavier gauges of metal the bends will be of greater consequence, as will be shown in the sketches.

Any bend in metal will consume a quantity of that metal. The amount is small in light gauges, but increases rapidly with each heavier gauge worked. The type of metal used has a bearing on the metal consumed in bends. If we figure the same stretchout for cold or hot rolled steel, iron or aluminum, we shall discover that the parts, though blanked to a uniform size and processed through the brake at identical die or blade adjustments, will not fit together. Soft metal will congest much more in the bend than hard metal, due to the movement of the grain in the softer sheet. In the common run of work the same type of metal sheet is used for job after job, so these variations are not noticed. But in almost every type of sheet metal fabrication the behavior of the metal during bending will have an effect on the assembly of the final product.

Fabrication of heavier gauges of metal for such purposes as production of equipment for restaurants, food stores, etc.; decorative store fronts; industrial and construction work creates a more serious problem than found in working lighter material. In most of these instances accurate fits are required and it is sometimes necessary to join a new part to an existing assembly. Therefore, the calculation of the amount of metal consumed in the necessary bends is of great importance.

Metal Behavior

The sketches show the behavior of metal in three types of bends, Fig. 1, the congested bend; Fig. 2, the compressed bend; Fig. 3, the air bend. In the illustrations we magnify the bend, showing a 3/16 in. metal thickness and using a scale in the bends, showing the action of the metal on that scale. By dividing the 3/16 in. thickness results figures are obtained applying to lighter gauges, as shown in the drawings. It might seem that in very light gauges the metal consumption

Metal Consumption In Various Brake Bends

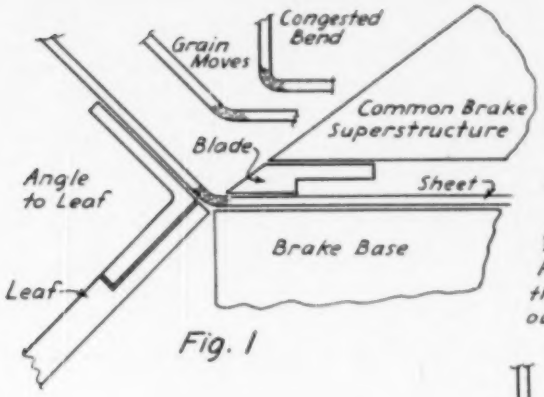
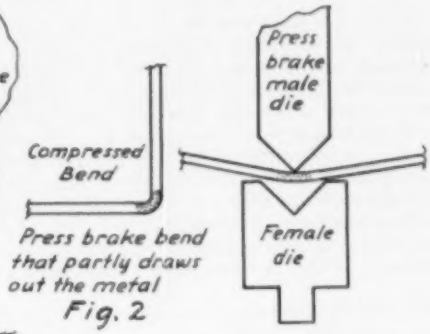


Fig. 1



Press brake bend that partly draws out the metal

Fig. 2

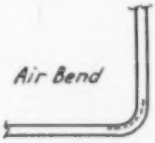
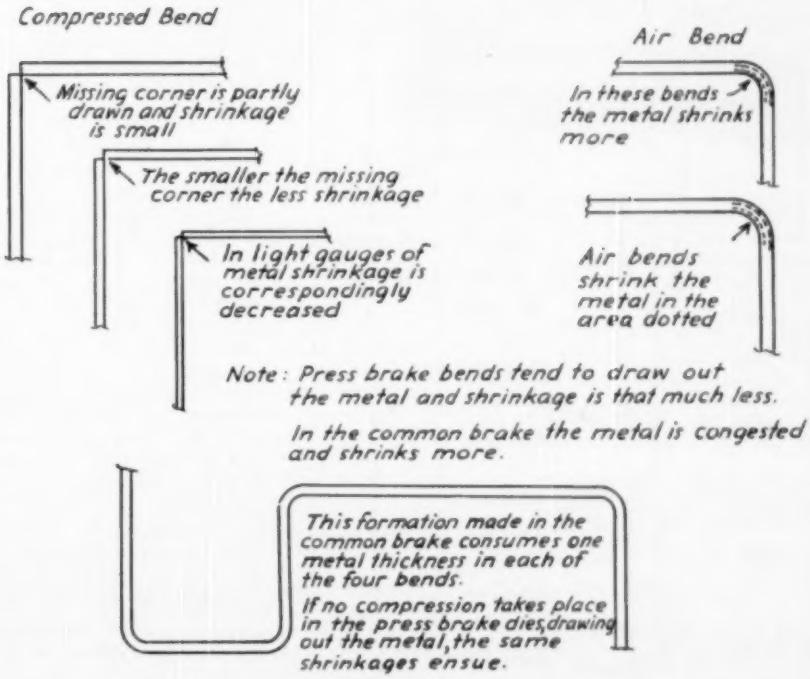


Fig. 3



in the bend is too small to affect the fit of the product. However, totaling the number of bends in the stretch-out, each consuming a certain amount of the metal, will indicate that the overall consumption is large enough to cause the part to differ in size from the one it is required to fit.

Wartime Problems

During the war, when sheet metal parts for aircraft and marine uses were made according to layouts based on shrinkage data contained in current handbooks, it was discovered that such parts would not fit properly unless processed in a press brake. The press brake forms a compressed bend which draws out the metal to fill any gaps, as shown in the second drawing. Examining the sketch it is apparent that the gap must be filled somehow and that a shrinkage allowance will not solve the problem. As stated, in press brake bends which utilize great pressure the metal is drawn out to fill the gap. When this drawing out does not take place, the metal flows from the area of the bend (as in an air bend) and the blank loses much of its sheared size.

Hardness Governs Loss

Certainly the radius of the corners is shorter than a sharp angle and the difference between the two might exceed the given shrinkage, with the result that the blank gains instead of losing. The amount of metal consumed in bending depends to a large extent on the hardness of the metal itself. Experiments have shown that sheet iron will shrink twice as much as cold rolled sheet steel. In another test, a sheet of lead shrank three times as much as a sheet of hardened brass, under identical conditions.

In subsequent articles we shall deal with metal consumption in various bends, made in different brakes. Purpose of this analysis will be to compile a table for use in the layout of blanks. Any table of this type is more easily understood if the user is familiar with the basis on which the table has been compiled.

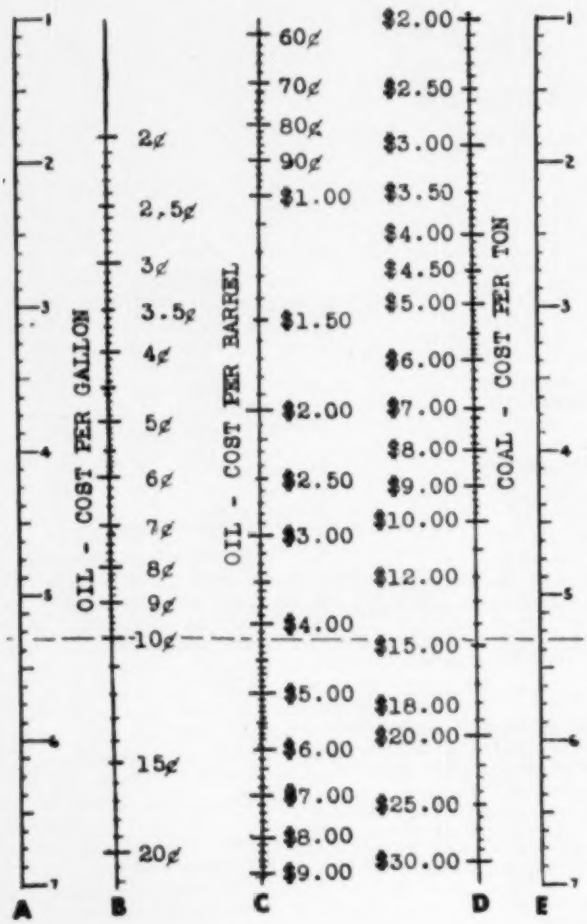


Chart Compares Cost of Fuel

SHALL I BURN oil or coal? That problem is bothering most of us more and more. So, the writer prepared this chart. Merely run a straight line horizontally, from left to right, or right to left, and there's the answer—in column B, C, or D.

Oil vs. Coal

For example, let us say that your fuel oil costs 10 cents per gallon. Run a horizontal line through the 10 cents, column B, as indicated by the dotted line across this chart, and column D tells you that 10 cents per gallon for oil is equivalent to about $14.80 per ton for coal. Therefore if coal costs $18 per ton it is apparent that oil would cost less.

Sometimes oil is purchased by the barrel and that is why column C is included. For example, if you pay $4.20 per barrel, the same dotted line indicates that it is equivalent to 10 cents per gallon, or $14.80 per ton for coal.

The scales A and E are identical, as will be noted. They are made so to assist in running a perfectly horizontal line across the chart.

W. F. SCHAPHORST
Newark, N. J.

● The Revere-Simplex Reglet System is an economical and efficient method of flashing spandrel beams and column faces with enduring copper. This system offers the following advantages:

Affords greater moisture protection for the building.

Eliminates the necessity of flashing the entire face of each spandrel beam. In that way, it not only avoids interference with wall ties, stone anchors, angle bolts, etc., but also insures substantial economies through a large saving in flashing material.

Diverts all seepage to the exterior wall face, and prevents rusting of the steel work.

Is based upon the use of the Revere-Simplex Reglet, which is a simple, practical, easily installed receiving device for securing metal flashings in concrete. This patented reglet provides a permanent watertight connection between concrete and copper flashing, for all concrete surfaces.

The Revere-Simplex Reglet not only overcomes installation difficulties experienced with ordinary "open slot" metal reglets, but provides a substantial saving in cost as well. This is due to its many exclusive features, all of which cut down installation time and insure a superior flashing installation.

Write today for your copy of the new 6-page folder which describes the Revere-Simplex Reglet System for flashing spandrel beams. You can line up *new* jobs—make *new* profits—through the use of this new Revere product that enables you to bid competitively against mopped-on waterproofing!

Revere products now available through your Revere Distributor include: Sheet and Roll Copper for roofing, gutters, flashing, etc.; Lead-Coated Copper; Revere-Keystone Thru-Wall Flashing; Revere-Simplex Reglet and Reglet Insert Flashing; Revere-Keystone Vertical Ribbed Siding. A Revere Technical Advisor will always be glad to consult with you without obligation.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

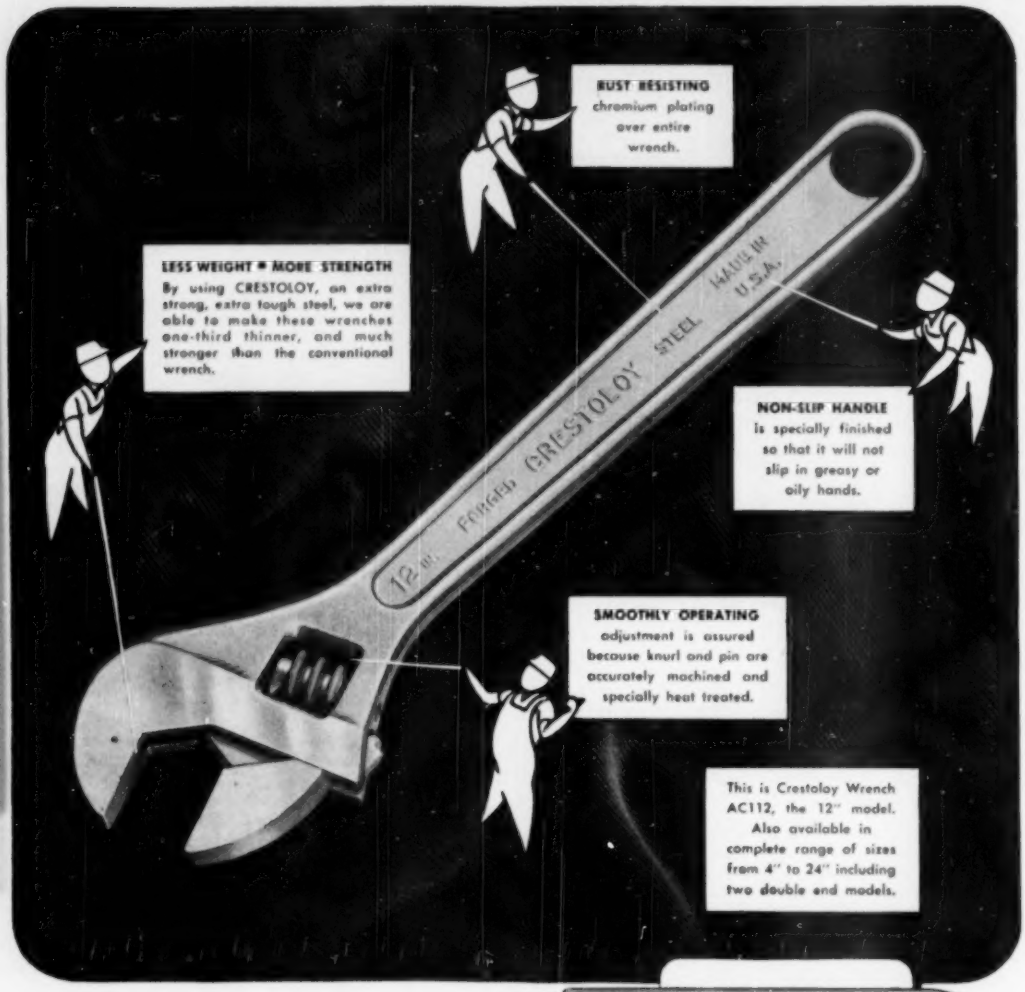
230 Park Avenue, New York 17, New York

• • •

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y.
Sales Offices in Principal Cities, Distributors Everywhere.

Copper Makes Common Sense

CRAFTSMEN RECOGNIZE QUALITY *by these fine features in* ADJUSTABLE WRENCHES



EVERYBODY RECOGNIZES QUALITY *by this Trade-mark*

CRESCENT TOOLS

Sign of the Artisan
Symbol of Excellence

"Crescent" is our trade-mark, registered in the United States and abroad, for wrenches and other tools. Sold by leading distributors and retailers everywhere and made only by

CRESCENT TOOL COMPANY, JAMESTOWN, NEW YORK

Indiana

The program of the 32nd annual convention of the Sheet Metal and Warm Air Heating Contractors Association of Indiana has been planned to meet the express desires of members and sponsors as tabulated from questionnaires filled out by registrants of the last convention.

According to the tentative program, committee meetings, directors meeting, and registration will take place on Thursday morning, February 2. The convention will open at 1:30 p.m. with an address by President Wm. E. Garber, Jr. Speakers will include Joseph D. Wilder, executive secretary of the Sheet Metal Contractors' National Association, and Harold F. Carey, of the Wm. Block Co.

A banquet and dance for members and guests is scheduled for 6:30 p.m.

The speakers on Friday morning will discuss the sales problems in the field, while the more technical side of the heating field will be featured in the afternoon addresses. Professors Fred B. Morse and William Miller, both of Purdue University, will speak on condensation in structures and on combustion. Merle B. McClure, also of Purdue, will report on plans for the warm air heating short course to be held on the Purdue campus in April.

The twelfth floor of the hotel will be the headquarters of sponsors who will welcome visiting contractors. All sponsors are requested by Secretary Frank E. Anderson to rush reservations to Homer Selch, chairman of the hotel committee, at 944 Holbrook St., Indianapolis 3.

Canada

The Sixth Annual Convention of the Canadian Chapter of the National Warm Air Heating and Air Conditioning Association was held at Chateau Frontenac, Quebec City, on December 9, with 20 manufacturer members and a number of associate members from the warm air heating contracting industry in attendance. Vice President H. T. Williams presided in the absence of President J. P. Thibault, who was unable to attend because of illness.

Statistics from the report of C. B. Taylor, managing director of the chapter, and his associates showed that the manufacturer division had increased by 5 new members, from 29 to 34. The jobber division increased from 11 to 16, and the heating contractor division increased by 111 members, from 447 to 558 as of September 30, 1949.

F. W. Taylor reporting on the schools program, stated

(Please turn to page 172)

Coming Events

Jan. 19-21—Sheet Metal & Roofing Contractors Association of Minnesota, Inc., Annual Convention. Hotel Nicollet, Minneapolis, Minn. C. E. Parriott, Secretary, 924 Raymond Ave., St. Paul 4, Minn.

Jan. 23-27—American Society of Heating and Ventilating Engineers, Southwest Air Conditioning Exposition. State Fair Grounds, Dallas, Texas. E. K. Stevens, Associate Exposition Manager, Grand Central Palace, New York City.

Feb. 2-3—Sheet Metal and Warm Air Heating Contractors Association of Indiana, Inc., Annual Convention. Hotel Severin, Indianapolis, Ind. Frank E. Anderson, Secretary, 439 So. 17th St., Terre Haute, Ind.

Feb. 11-19—The Home Builders Association of Greater St. Louis, Bildors Home Show. Kiel Auditorium, St. Louis. H. J. Loosley, Managing Director, 1624 Delmar Blvd., St. Louis 3.

Feb. 19-23—National Association of Home Builders, 6th Annual Convention and Exposition. Stevens and Congress hotels, Chicago, Ill. Paul S. Van Auken, Exposition Director, 111 W. Washington Blvd., Chicago.

Feb. 20-22—Sheet Metal Contractors Association of Wisconsin, Inc., Annual Convention. Schroeder Hotel, Milwaukee, Wis. Irving F. Kanitz, Executive Secretary, 225 E. Michigan St., Milwaukee 2, Wis.

Feb. 27-March 1—Ohio Sheet Metal Contractors' Association, Annual Convention. Carter Hotel, Cleveland, Ohio. M. J. Cutter, Chairman, 4408 St. Clair Ave., Cleveland 3, Ohio.

Mar. 6-9—Michigan Sheet Metal, Roofing, Heating and Air Conditioning Contractors' Association, Inc., Annual Convention. Detroit-Leland Hotel, Detroit, Mich. N. J. Biddle, Secretary, 3035 E. Grand Blvd., Detroit 2, Mich.

Apr. 11-13—New York State Sheet Metal, Roofing and Air Conditioning Contractors' Association, Inc., Annual Convention. Hotel Syracuse, Syracuse, N. Y. Clarence J. Meyer, Secretary, 567 Genesee St., Buffalo 4, N. Y.

Apr. 24-28—Oil-Heat Institute of America, Inc., National Oil Heat Exposition. Commercial Museum, Philadelphia, Pa. Oil-Heat Institute of America, Inc., 6 E. 39th St., New York 16.

May 8-10—Sheet Metal Contractors' National Association, Annual Convention. Netherland Plaza, Cincinnati, Ohio. J. D. Wilder, Executive Secretary, 170 Division St., Elgin, Ill.

Pennsylvania Convention Has Several Themes

A. J. Sabathne

First convention of the revived Pennsylvania association was set up on the basis of several themes which would prove beneficial to all contractors who were willing to adopt them. The speeches forcefully brought out the importance of such action.

ORGANIZATION, teamwork, and service as an association function were the themes of the annual convention of the Sheet Metal, Air Conditioning, and Roofing Contractors' Association of Pennsylvania, held in the Berkshire Hotel, Reading, Pa., November 18-19.

The Friday session was opened with a message of welcome by Convention Chairman C. F. Luppold of Reading, who introduced President A. J. Sabathne, Altoona, Pa. Mr. Sabathne, who has been prominent in reorganization of the association, outlined the program of action which future association work will follow.

Joseph D. Wilder, executive secretary of the Sheet Metal Contractors' National Association, added his message of welcome to the association as an organized group. He commended the publicity campaign conducted by Mr. Luppold preparatory to the convention and urged everyone to make a serious effort to get new members for the association. Speaking of the industry throughout the country, Mr. Wilder remarked that there are only 12 state associations and that most of them do not have definite programs of activity.

There is a great deal more to running a successful state association, he said, than holding a convention once a year and appointing committees to plan the next convention.

The year 1950 is going to see a crisis in the labor situation, with welfare funds, social security, and pensions as major issues. Taxes are an important problem—in fact, the main problem as far as business is concerned—and there should be a united stand on all problems affecting the industry.

In conclusion, Mr. Wilder reminded the members that national and state problems affecting the industry can be better handled if associations are effectively organized.

Following a message of welcome by G. J. Nicolli, president of the Distributors' and Salesmen's Auxiliary, Pittsburgh, committee reports were read and the amended by-laws were adopted.

Addresses by Henry Johnston of Reading, A. B. Hall, president of the New York state association, and E. K. Thompson, secretary of the Pennsylvania auxiliary, covered the advantages to be gained for the industry by a well organized association.

Mr. Johnston, who is chairman of the board of the Outdoor Advertising Association of America, remarked that this was the first Pennsylvania association meeting since 1942 and said that business conditions made it an appropriate time for the association to meet as a reorganized group. Keen competition and reduction of free spending which is now appearing in business point to a need for a united stand in the sheet metal industry to guard interests of contractors. He urged members to engage in round table discussions, to pass along ideas and knowledge of new methods so that they can benefit every member of the association.

He concluded by expressing his opinion that all trade associations can do a great deal more than they are doing just by being active in their industry and taking a united stand on questions affecting them.

A. B. Hall, tracing the growth of the New York state association, said that their association was organized in 1922 and since then has steadily grown in membership. The present membership takes in up-state New York but there is a possibility of New York City contractors becoming members in the near future as they have been cooperating with the state association on many common problems.

Mr. Hall related that because of the high costs of compensation insurance rates in New York the association formed its own group within its insurance carrier. The association hires its own group manager, who, through elected directors, acts for the group participating in the state compensation insurance program. This group is restricted to association members and all applicants for insurance are carefully investigated in order to prevent any high accident risks in the group. The plan has paid for itself and saved members considerable money in their cost of compensation insurance.

Some New York state contractors have already contracted with their local unions to contribute to a welfare fund, and all members expect to pay welfare provisions next year. The fund is handled by a trusteeship, operated by directors from both the industry and the union.

Mr. Hall concluded his talk by urging that sheet metal contractors be proud of their industry and pro-

A. B. Hall — T. G. Stoudt — Joseph Burke — James M. Martin

tect their interests by supporting their state and local associations.

E. K. Thompson, Pennsylvania auxiliary secretary, stressed the need for a three point program for the Pennsylvania association, with organization, teamwork, and service as objectives. He also pointed out that the salesmen's auxiliary works with the contractors and carries the organization message and, in this way, is a valuable adjunct to the complete organization picture.

Following these addresses, members participated in an open forum presided over by President Sabathne. Subjects under discussion included unemployment compensation rates in Pennsylvania, the advisability of licensing heating contractors, and the ways and means which would be most effective in interesting more contractors in the activities of the state association. Discussion of a membership program was motivated by the previous report of the attendance committee which showed that salesmen made up almost two-thirds of the number in attendance at the convention.

Saturday sessions were opened at 9 a.m. with committee reports. The nominating committee submitted a slate of officers and directors which was unanimously approved as read.

Teamwork Advocated

First speaker of the day was T. Glenwood Stoudt, dean of men at Wyomissing Polytechnic Institute, Wyomissing, who spoke on teamwork in education and training for industry. Mr. Stoudt remarked that industry has to a great extent overlooked the importance of carrying on apprenticeship training. However, recent developments have evidenced a renewed interest in training programs and 39 large industries now have a system of cooperative training.

Teamwork in sports was the subject of a talk by Edward Cammarota, football coach and sports announcer, who explained the need for teamwork in sports and the corresponding need in industry.

Joseph Burke, president of the Building Trades Council, Philadelphia, discussed Teamwork in Vocational Training from Labor's Point of View. He said that the council has found as a result of its experience in apprentice training, that there is no real teamwork between the employers and the union. However, the building trades in Philadelphia and throughout the country now have more apprentices than at any other time in their history. According to Mr. Burke, the problem now is the development of apprentice training in the sheet metal industry in particular.

The national viewpoint was presented by James M. Martin, of the National Warm Air Heating and Air Conditioning Association. Mr. Martin said that his being invited to address the Pennsylvania association as a representative of the national association was in itself an example of teamwork in practice. Speaking of the national program, he mentioned that in addition to research and education activities, the association also sponsors a consumer publicity program, which can be successfully conducted only through teamwork. Teamwork in the sheet metal industry will increase the demand for sheet metal work, he pointed out, and will naturally result in more business for members. A strong state association helps the contractor to sell himself to the consumer.

Installation of officers was held at 11:30 a.m. Saturday and was followed by a luncheon to which ladies and auxiliary members were invited. A very well-known speaker, J. S. Pigott, entertained the members and guests with a humorous and instructive presentation of automobiles of the future.

The afternoon session, planned to develop the theme of service as an association function, was highlighted by addresses by R. S. Schmeider, Milwaukee, Wis., and John E. Phillips, Philadelphia, Pa. Mr. Schmeider discussed service from the manufacturer's viewpoint; while Mr. Phillips covered the service factor from the distributor's viewpoint.

A banquet held in the hotel ballroom and a lively program of entertainment concluded the convention activities.

1950 Officers

President ..... A. J. Sabathne, Altoona
1st Vice Pres..... Walter E. Keist, Jr., Pittsburgh
2nd Vice Pres..... H. T. Lyons, Bethlehem
3rd Vice Pres..... C. F. Luppold, Reading
Sec.-Treas. ..... E. W. Liebermann, Ambridge

Directors, 1 year term: R. S. Hahn, Easton; E. W. Scarborough, Pittsburgh; F. Coleman, Erie. 2 year term: Louis Trost, Erie; J. F. Ostrowski, Scranton; Joseph Hoosty, Berwick. 3 year term: A. R. Hoffman, Sharon; W. McBride, Beaver; C. K. Rhoads, Lancaster.

Association Activities . . . . .

(Continued from page 169)

that 1,283 delegates have attended the 32 warm air heating schools which the chapter has held to date. During 1949, 74 association certificates were issued, bringing the total to date to 290. He also reported that an advanced school would not be held in 1950 but that planning for the five day schools was well underway.

Program will include one and one half days for study of heat loss and gravity warm air heating; one and one half days for residential winter air conditioning, and two days for Manual No. 9, a church design problem. In addition, information on new research projects will be presented and short form No. 5, a design of the "loop" system for basementless homes will be distributed.

Both the test plans and the questionnaire will be given as home assignments for students who wish to obtain a certificate for the course.

Schedule of schools now available is as follows:

Jan. 9-13	Vancouver, B. C.
Jan. 16-20	Red Deer, Alta.
Jan. 23-27	Saskatoon, Sask.
Jan. 30, 31; Feb. 1-3	Winnipeg, Man.
Feb. 13-17	Toronto, Ont.
Feb. 27, 28; Mar. 1-3	Windsor, Ont.
Mar. 13-17	Kitchener, Ont.
Mar. 27-31	Montreal, Que.
Apr. 10-14	Ottawa, Ont.
Apr. 24-28	Amherst, N. S.
May 1-5	Quebec City

Registration fees will be $16.00 for the first delegate and $14.00 for each additional delegate attending from the same place of business.

Officers and Directors, 1950

President: J. Paul Thibault, L'Islet Station, P.Q.; Vice-President: H. T. Williams, Toronto, Ont. Directors: M. H. Smith, Preston, Ont.; R. V. Millar, Toronto, Ont.; and D. S. Fisher, Sackville, N.B.

California

The regular meeting of the Institute of Gas Heating Industries, Inc., was held on November 10 with 79 members and guests in attendance. During the business meeting, President Dicus introduced two new members: Bob Wettstein (associate member), Los Angeles, and Glenn Mitchell, Alhambra, Calif.

Gordon Oury, chairman of the heating engineering and sales program, distributed questionnaires to those present to determine their wishes regarding the location for the heating engineering sales classes. It was decided that classes, beginning in February, will be held at the Hollywood auditorium of the Southern California Gas Company.

The entertainment program featured a color film on tuna fishing. At the conclusion of the film, Leo Hungerford, program chairman, introduced Fred Farmer, who discussed the need for organizing the heating business with prices and labor definitely determined on each job. He emphasized the necessity of selling the product and installing it properly so that each job results in a satisfactory customer-dealer relationship.

Members and guests at the December meeting of the Institute totalled 83. Fred E. Cannon, Los Angeles, was welcomed as a new member.

The report of the nominating committee for officers and directors for 1950 was made by Chairman R. O. Montrief. The secretary was instructed to cast a unanimous ballot for the nominees. New officers and directors are as follows:

President ..... T. R. Bridges
Vice-President ..... Harry F. Haldeman
Secretary-Treasurer ..... Fred L. Howard
Directors: Walter R. Dicus, Leo Hungerford, Glenn Ashburn, and W. O. Wylie.

The evening's program was devoted to advertising as it applies to the heating industry. A panel of five well-known advertising men—Bernard Slavin, Will Grant, Robert Schmelzer, Don Walsh, and Robert Hixson—discussed the various advertising problems affecting the industry.

INDOOR COMFORT CONFERENCES

Columbus, Ohio.—Jan. 16-17. Newt T. Hess, 63 E. Goodale St., Columbus 8.

Minneapolis, Minn.—Feb. 6-7. Stuart A. Smith, 1121 Jackson St., N.E., Minneapolis.

Duluth, Minn.—Feb. 9-10. J. P. Nelson, 309-49 S. 5th Ave., Duluth 1.

Billings, Mont.—Feb. 13-14. A. C. Hovland, Kelley-How-Thomson Co., Billings.

Denver, Colo.—Feb. 17-18. J. H. Singleton, C. A. Crosta, Inc., Denver 2.

Omaha, Nebr.—Feb. 20-21. W. E. Nesbit, 411-17 S. 10th St., Omaha 8.

Des Moines, Iowa—Feb. 24-25. John C. Rehmann, Dean Ave. at E. 26th St., Des Moines 17.

St. Louis, Mo.—Feb. 27-28. W. L. Dulle, 1952 Kienlen Ave., St. Louis 20.

Binghamton, N. Y.—March 9-10. C. H. Starr, 168 Water St., Binghamton.

Newark, N. J.—March 13-14. Russell M. Cook, Thatcher Furnace Co., Garwood, N. J.

Philadelphia, Pa.—March 16-17. John E. Phillips, Stelwagon Mfg. Co., Philadelphia 46.

Pittsburgh, Pa.—March 20-21. J. E. Eckstein, 526 Galveston Ave., N.S.; Louis F. Demmler, 100-108 Ross St., Pittsburgh.

Atlanta, Ga.—Apr. 3-4. Rudy Brown, 379 Nelson St., S.W., Atlanta.

Birmingham, Ala.—Apr. 6-7. Geo. F. Wheelock, 3017 Second Ave., S., Birmingham.

Chicago, Ill.—Apr. 17-18. Geo. Kalvog, 5109 W. Chicago Ave., Chicago 51.

South Bend, Ind.—Apr. 20-22 (basic three day school). Richard J. Young, 416 S. William St., South Bend 1.

Fort Wayne, Ind.—Apr. 24-25. H. F. Blackburn, 234-6 Murray St., Fort Wayne 5.

Appleton, Wis.—Apr. 28-29. J. C. Berger, 100 Stuart St., Green Bay, Wis.

Registration fee for the two day conference is $12.50 per student. Fee for the three day conference in South Bend is $15.00.

EQUIPMENT DEVELOPMENTS

Package Air Conditioner 1

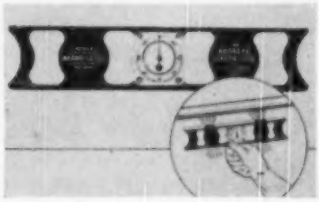
Refrigerated air conditioner is now available in a 10 ton self-contained package unit with evaporative condenser built in as an integral part of the unit. This conditioner is an addition to the manufacturer's line of 15, 20, and 25 ton package units. It is identical with the larger sizes; being completely paneled with each panel insulated. Will also have a single electric panel board recessed in front section of unit where it can be inspected without removal of any panel. Starter switches and overload protectors, gauges, thermostat, etc., are all housed behind a plexiglas panel.

Descriptive literature is available.

Alton Mfg. Co., Dallas 2, Texas.

Level-Angle Indicator 2

Combination level and angle indicator, called the Magno-Level, is magnetized to stick to any piece of ferrous metal. Recommended for use by sheet metal, construction and maintenance workers, and welders.



Powerful Alnico permanent magnets enable the magnet to cling to either round or flat surfaces at any angle, leaving the operator's hands free for line up or fastening of work. It has a clock-faced angle gauge with balanced gravity needle, rotating on jewel bearings, which immediately and accurately determines any angle from 0 to 360 deg.

Frame is of alloy aluminum with black wrinkle finish, equipped with plastic windows. Magno-Level measures only 9 by 2 in., weighs only 10 oz.

The Buckeye Plastic Corp., 740 Superior Ave., N.W., Cleveland, Ohio.

(Use Coupon on This Page)

Vitreous Enameled Chimney . 3

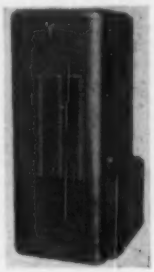
Vitreous enameled metal chimney, known as the Vitroliner Type E flue, is designed to take the place of a masonry chimney. The flue is designed to be used in bungalows or single story buildings where heating plant is on the first floor and flue extends from the ceiling through unoccupied attic space. In this construction, coal, oil, or gas can be used. In multiple floor construction or where heating plant is in the basement, the chimney can be used in connection with gas fired systems only.

Vitroliner chimney weighs only 10 to 15 lbs per ft and is available in 6, 7, or 8 in. diameters. Descriptive literature containing construction specifications and installation instructions is available.

Condensation Engineering Corp., 122 S. Michigan Ave., Chicago 3, Ill.

Gas Fired Furnace 4

Gas fired forced air furnace, Model 82B, has input rating of 95,000 Btuh and output of 76,000 Btuh. Air delivery rate when used with conventional duct system is 930 cfm at .25 in. water gauge. When used with the manufacturer's Blend Air system, blower is adjusted to deliver 615 cfm through furnace with an equal volume recirculated by blending for total circulation of 1,200 cfm. Unit requires only 5 sq ft of floor space and can be installed in recreation or utility room, as well as in the basement.



Features include Even-Flo blower, easily adjusted by sliding cut-off block arrangement. It is direct driven and treated for quiet operation. Burner has two banks of 18 in. pressed steel burners with v-shaped burner ports of stainless steel.

Overall dimensions of furnace are 62¾ in. high, 30 in. deep, and 24 in. wide. AGA approved.

The Coleman Co., Inc., Wichita, Kans.

MAIL THIS NOW!

We will ask the manufacturers to send full particulars about the products and literature mentioned. 1-50

Be sure to circle the items you want.

Equipment Developments

1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19

New Literature

201 202 203 204 205 206 207 208 209
210 211

Manufacturer ☐ **Jobber** ☐ **Dealer** ☐

Name .....

Company .....

Address .....

Address: AMERICAN ARTISAN, 6 North Michigan Ave., Chicago 2, Illinois

EQUIPMENT DEVELOPMENTS

(Use Coupon on Page 173)

Compact Gravity Furnace . . . 5

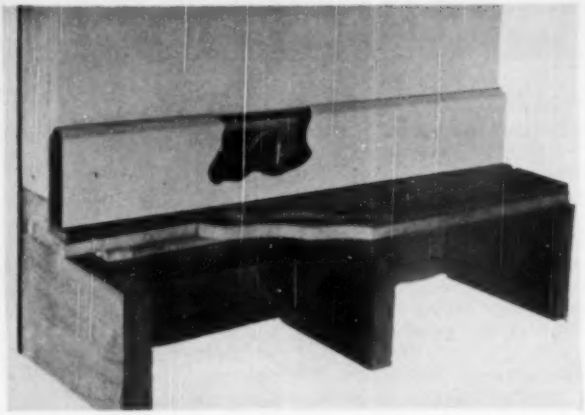
Gas fired gravity furnace, designed for the low-cost housing market, is compact in size, measuring 25½ in. wide, 51 in. high, and 26½ in. deep. The unit, Type 111, has a heavy, welded steel heat exchanger (illustrated) with square radiator connected in a way that eliminates expansion and contraction strain and noise. Square radiator insures even distribution of heat, and eliminates cold corners.

Burner is circular, of cast iron drilled-port design. Manifold, with controls, is external to the unit.

Furnace is shipped pre-assembled in two packages, and solid base with leveling screws is provided. It is AGA approved for all fuels and for high altitude installation. Rated at 90,000 Btu.

L. J. Mueller Furnace Co., Milwaukee, Wis.

Wall Base Perimeter Heating System 7



Heating system designed to provide even temperatures between floor and ceiling and to eliminate cold drafts along windows and outside wall areas is being offered as the Wall Base perimeter heating system.

A special perimeter baseboard replaces the usual wooden base installed in the home, as well as the conventional warm air registers. Heat enters the room along the entire length of the outside wall, through a narrow slot formed in the heavy 20 ga steel base. The heated air is allowed to flow upward, adjacent to the wall, thereby blanketing outside walls and window areas with a layer of heated air. This baseboard comes in lengths of 2 to 8 ft.

The wall base heating system is easily installed using standard equipment, piping, and procedures. The accompanying photograph shows how wall base heating is installed in conventional home construction.

With this heating method, continuous air circulation is achieved without creating air currents noticeable to occupants of the room.

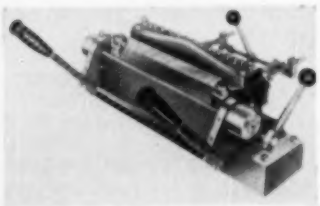
Brandes Company, Madison 4, Wis.

Box Fingers 6

Precision box fingers are being offered as a valuable accessory for all Di-Acro brakes. The fingers, in a box finger bar which can be used on all standard brakes, are graduated in size to cover the entire box forming range from ½ in. to maximum size of each model brake in ⅛ in. steps. They are hardened, precision ground, and accurately mounted against a machined surface.

Rigid construction of the box finger bar allows full capacity forming over its whole length and it can therefore be employed for a wide variety of operations other than box forming. A new box depth gauge is included with each bar.

O'Neil-Irwin Mfg. Co., 394 Eighth Ave., Lake City, Minn.

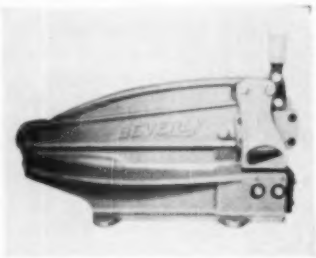


Inside Slotter 8

Portable, hand-operated deep throat inside slotter is designed for fast, accurate inside slotting and punching at any point up to 8 in. inside. Shearing capacity is 16 ga mild steel.

Punch and die arrangement of five high carbon, high chrome cutting blades in the slotter permit work of punch press accuracy. Four lower blades arranged in rectangular shape to form a die provide maximum support for shearing action of upper blade. All five blades are adjustable to compensate for wear and various thicknesses of metal being cut.

A slot 2½ in. long and ⅛ in. wide can be cut at one stroke of the unit. Upper blade for cutting a slot 1/16 in. wide may be had on special order.



Slotter is made of strong, lightweight aluminum alloy. Dimensions: 18 in. long, 9¼ in. high (less handle). Weight, 17½ lbs.

Beverly Shear Mfg. Co., Chicago, Ill.

Gas Fired Gravity Unit 9

GR Series gas fired gravity furnaces are offered in two sizes: GR-75, with input of 70,000 Btuh, output of 52,500 Btuh; and GR-100, with input of 100,000 Btuh and output of 75,000 Btuh. Units are supplied with new style casing in blue Hammerloid baked enamel. Casing door completely conceals manifold and controls. Fully AGA approved for natural, mixed, and manufactured gas.

GHB-80 Hi-Boy utility unit, with input of 80,000 Btuh and output of 64,000 Btuh, is recommended as a compact unit for basementless small homes, stores, offices, or shops. Casing of this unit is finished in same manner as that of the larger unit.

Dowagiac Steel Furnace Co., Dowagiac, Mich.

Commercial Incinerator ...10

Gas fired incinerator, for use in stores, factories, schools, apartments, etc., is designed to reduce cost of refuse handling and removal. Known as the Winnen CB-20, the unit is shipped knocked down ready for erection on the job site. It is constructed of heavy gauge steel throughout and has a 20 bu capacity combustion chamber lined with fireproof Haydite slabs. Manufacturer claims it will consume 400 lbs of 50 per cent moisture content garbage or trash per hr.

Twin burner mechanism provides intense flame with natural, manufactured, or bottled gas. A forced draft, ventilating system eliminates smoke and odor inside the building. Incinerator is equipped with either a manually operated or continuous flame pilot.

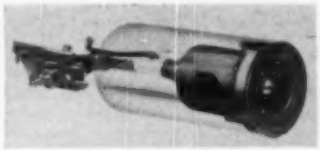
Dimensions are: height, 84 in.; width, 41 in.; length, 41 in.

Ramsey-Bennett Co., 430 Huron Rd., Cleveland 15, Ohio.

New Firing Head 11

New firing head for oil burners permits more accurate adjustment of the flame, reduces caking or carbonizing around nozzle, and keeps both nozzle and electrodes clean for a longer time.

Electrodes and nozzle are housed in a separate shell within the manifold tube. Inner assembly can be quickly moved forward or back to adjust ratio of primary to secondary air to provide the best combustion.

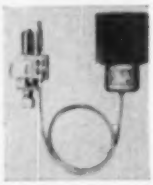


Firing head is standard equipment on the manufacturer's Model L and O burners in sizes up to 5 gph. Conversion kits are also available for adding the firing head to burners already in the field.

Century Engineering Corp., Cedar Rapids, Iowa.

Gas Controls 12

Non-flash automatic gas pilot employs an electric contact switch remote from the liquid filled bulb and is engineered to prevent gas from burning at the orifice. Large primary air port enables primary air to move at low velocity, so that no foreign matter is drawn into the pilot.



This Series 1001 safety pilot, applicable to natural, manufactured, or mixed gas by a simple change of orifice, is available with a variety of mounting brackets and burner tips for all types of burners.

Solenoid gas valve, Series 3500, is offered for use on space heaters, central heating equipment, and conversion burners. One model of this valve can be used for all gases. Valve insures positive shut-off and quieter operation.

It is available in low and line voltage models in ½, ¾, and 1 in. sizes, with or without manual opening device.

Perfex Corp., 500 W. Oklahoma Ave., Milwaukee 7, Wis.

Conversion Gas Burner 13

New line of gas conversion burners supersedes manufacturer's popular series R and S burners. They are equipped with either round or oval heads for round or rectangular furnace or boiler firepots. Capacity of each burner is from 60,000 to 300,000 Btu.

Important feature is design of fuel door burner which permits burner head to maintain uniform high efficiency in a wide range of firepot sizes.

Descriptive literature available.

Handley-Brown Heater Co., Jackson, Mich.

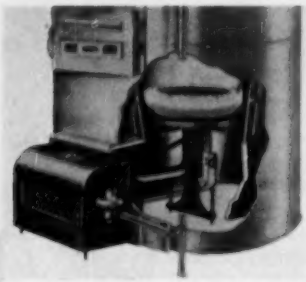
Automatic All-Gas Burner ..14

Completely automatic conversion gas burner includes all of the automatic controls found in modern gas furnaces: automatic gas safety pilot, automatic gas valve and pressure regulator, automatic thermostatic control and pilot igniter.

To assure maximum efficiency, burner is so constructed that no joints or pockets retard flow of gas and air. Combination cast iron manifold and brass orifice permit proper adjustment of gas to exact

EQUIPMENT DEVELOPMENTS

Use Coupon on Page 173



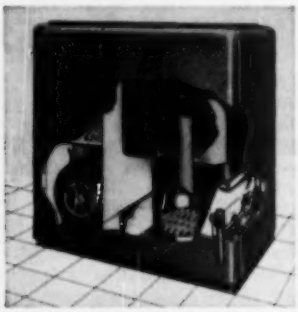
quantity needed for each type of home to be heated. Flame spreader will withstand extreme heat shock, will not crack and is non-soot retaining, according to the manufacturer.

Burner is designed to use natural, mixed, manufactured, and LP gases.

Perfection Stove Co., 7609 Platt Ave., Cleveland 4, Ohio.

Gas Fired Furnaces.....15

Gas fired warm air conditioners and gravity furnaces are designed with multi-port burners to burn all types of gases. Conditioners have input range of from 70,000 to 210,000 Btu; gravity units have Btu input of 70,000 to 140,000.



Units are equipped with completely automatic controls and are enclosed in cold rolled steel baked enamel cabinets.

Gas fired hi-boy conditioner is also available in two models, with Btuh input of 70,000 or 105,000.

Harvey-Whipple, Inc., Springfield 1, Mass.

Squaring Shears 16

Line of air power squaring shears includes shears with cutting lengths of 36, 42, 52, 72, 96, and 120 in. Shears of 72 in. and less are designed to shear sheets of 16 ga or less; 96 and 120 in. shears have rated capacity of 18 ga.

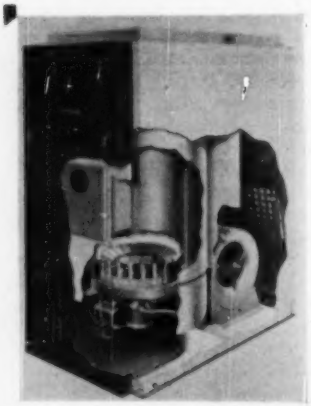
Each shear is completely equipped with air valve, cylinder, and pilot valve, and is ready for operation as soon as connected with air supply line. Only 75 to 85 lbs of air pressure is needed for operation. Stand-

ard equipment includes front, back, and side gauges, positive holddown and stainless steel scale imbedded near each end of the table.

Wysong and Miles Co., 650 Fulton St., Greensboro, N. C.

Oil Fired Conditioner 17

Rotary fired winter air conditioning unit has been added to a line of domestic heating equipment. Furnace is only 57 in. high and occupies a floor space of 47½ x 26½ in. Fired with the rotary burner, this unit delivers a full 90,000 Btuh



of filtered warm air. Stainless steel hearth ring forces flame to wipe inner wall of new drum type heat exchanger, design of which prohibits hot spots.

Furnace is attractively finished in beige and red baked enamel.

Anchor Post Products, Inc., Fluid Heat Div., Baltimore 24, Md.

Multi-Stage Oil Burner 18

Multi-stage burner is designed to burn thermal catalytical cracked oil with high efficiency. It operates with a CO_2 average of 12.5 to 13 per cent flue gas temperature of 450 to 500 F, and an efficiency of 82 to 83 per cent, according to the manufacturer.

They are said to operate efficiently on a draft of .025 to .03 water column inches. Laboratory tests have been successful on 25, 50, and 100 per cent thermal catalytical cracked oils.

Benner-Nawman, Inc., Oakland, Calif.

Pressure Oil Burner 19

Pressure oil burner is designed to handle any job requiring a burner capacity of from 1 to 6 gph fuel consumption. The blower is so engineered that by a simple adjustment of air intake hood, adequate air to thoroughly atomize the fuel is furnished for any capacity in this range. Two deflectors snouts are supplied: one for 1 to 3 gal capacity; the other for larger capacity jobs.

Burner is equipped with both an adjustable pedestal stand and a flange. Removal of four screws on back plate permits assembly of transformer, ignition electrodes, and burner tip to be removed for easy servicing.

Kresky Mfg. Co., Inc., Petaluma, Calif.

Timely Tips on Stainless Steel Shop Practices

HELIUM ARC WELDING

This process makes possible high welding speeds and good weld quality, particularly with thinner ENDURO sheets. The helium shield maintains high ductility in the weld. Use conventional dc motor-generator arc-welding units, with tungsten electrode. Argon is often used in place of helium since it is also an inert gas.

CLEANING

Many successful fabricators apply a solution of finely bolted whiting to ENDURO's polished surface after forming. The whiting is not wiped off until the work is ready for crating or shipping. This practice protects ENDURO during handling, and leaves a clean surface, free from fingermarks, loose dirt and grease.

SOLDERING

Proper fluxes are very important for solder adhesion. A number of excellent prepared fluxes for use with stainless steel are on the market. Their use is recommended highly. A second requirement for good soldering technique is that the soldering iron be large enough to retain sufficient heat to complete the work without reheating.

REMOVING EXCESS SOLDER

Excess solder easily can be scraped from ENDURO surfaces, and so doing avoids the appearance of unsightly or crudely made joints. Use a stainless steel tool, so that no foreign metal possibly can become embedded in the surface. The stainless scraper should be somewhat softer, or of the same hardness, so that it will not tend to scratch ENDURO's polished surface.

Homes, stores and offices, industry and research, all offer expanding markets for stainless steel equipment. Thousands of progressive sheet metal shops are turning this demand into steady, profitable business by using the simple techniques of working ENDURO Stainless Steel. Republic's two books, "THE FABRICATION OF REPUBLIC ENDURO STAINLESS STEEL" and "THE WELDING OF REPUBLIC ENDURO STAINLESS STEEL" are valuable guides to correct shop practices. Write for your free copies.

REPUBLIC STEEL CORPORATION

Alloy Steel Division • Massillon, Ohio

GENERAL OFFICES • CLEVELAND 1, OHIO

Export Department: Chrysler Building, New York 17, New York

...AND THE BEST TIP

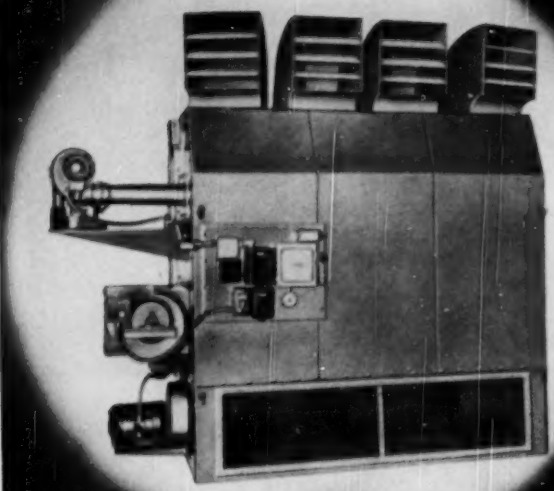
ALWAYS USE . . .

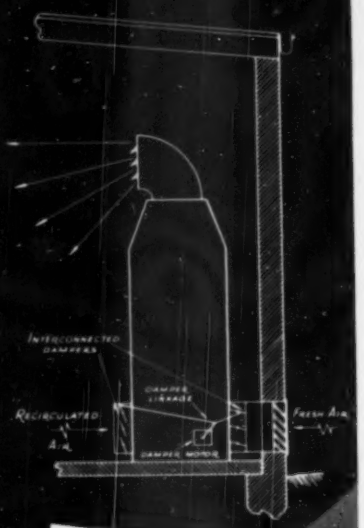
Republic

REPUBLIC STEEL

ENDURO STAINLESS STEEL

Other Republic Products include Black, Galvanized, Galvannealed and Electro Paintlok Sheets—Toncan Iron Sheets





AIRTHERM

Provides You a Complete Heating and Ventilating System in One Compact Unit

Airtherm Direct Fired Heater installed for heating as well as ventilating. Fresh air inlet connection and interconnected dampers control flow of recirculated and fresh air. Designed to provide makeup air to balance vacuum effect resulting from exhaust systems. Ideal for summer ventilation.

The Airtherm Space Heater has been designed with extreme flexibility for heating as well as ventilating steel plants, foundries, all types of industrial buildings and warehouses. They are furnished complete with all operating and safety controls for automatic operation. Airtherm space heaters have a heavy duty steel combustion chamber lined with castable refractory for simple maintenance and long life.

Available in 9 models—oil* or gas fired—ranging from 650,000 to 1,950,000 Btu per hour output, in floor mounted or suspended types.

For detailed information write for Catalog 802

*Approved by Underwriters' Laboratories

For Heating Satisfaction . . . Think First of AIRTHERM

Oil or Gas Direct Fired Heaters

Horizontal Type Unit Heaters

Vertical Type Unit Heaters

Centrifugal Fan Type Unit Heaters

Convectors

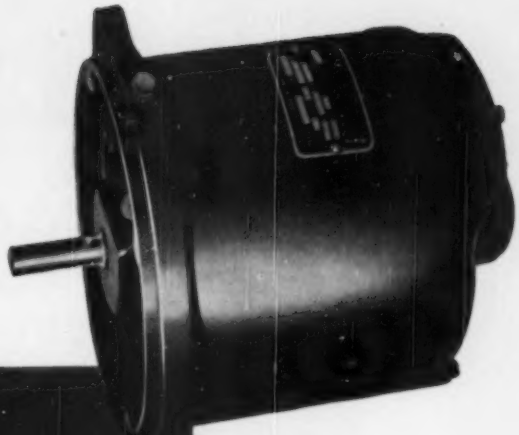
-94

AIRTHERM MANUFACTURING COMPANY

706 South Spring Avenue, St. Louis 10, Missouri

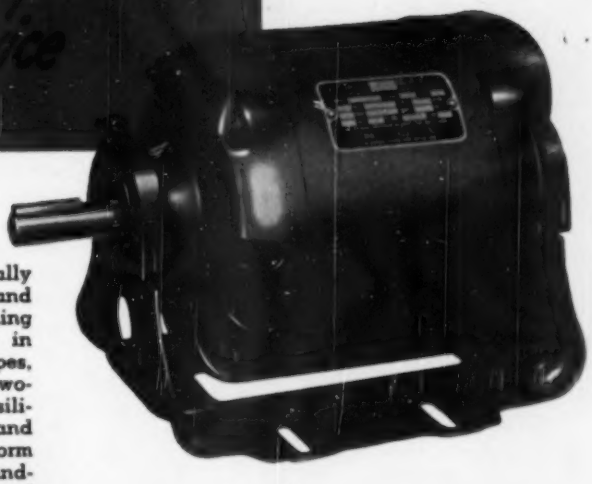
OIL BURNER MOTORS

Delco split-phase, flange-mounted motors, specifically designed for oil burner application, conform to NEMA and other established standards of efficiency, safety and performance. Thermotron-protected against damage from stalling, overload and faulty power supply. Available in 1/6- to 1/4-H.P., 50- and 60-cycle, constant speed. Noted for their quiet operation and long life.



DELCO MOTORS

for better heating... better service



BLOWER MOTORS

Delco blower motors are specifically designed for belt-driven blowers and fans used in heating, air conditioning and filtering systems. Available in split-phase and capacitor-start types, 1/6- to 3/4-H.P. ratings, single- and two-speed design. These motors have resilient mountings, sleeve bearings and Thermotron protection. They conform to NEMA and other established standards of efficiency, safety, long life and quiet operation.

NOTE TO MANUFACTURERS: *There are Delco offices located in Chicago, Detroit, Cleveland, Hartford, Conn., Philadelphia and Cincinnati.*

DELCO MOTORS

DELCO PRODUCTS

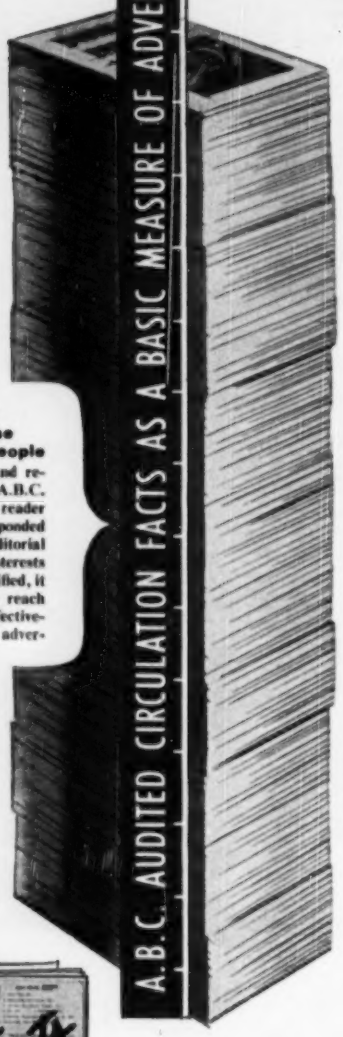
Division of General Motors Corporation, Dayton, Ohio

DELCO DAYTON OHIO

SEE YOUR LOCAL AUTHORIZED DEALER

Use this Rule of Facts *for measuring Advertising Values*

A.B.C. AUDITED CIRCULATION FACTS AS A BASIC MEASURE OF ADVERTISING VALUES



Send the Right Message to the Right People

Paid subscriptions and renewals, as defined by A.B.C. standards, indicate a reader audience that has responded to a publication's editorial appeal. With the interests of readers thus identified, it becomes possible to reach specialized groups effectively with specialized advertising appeals.

THERE is no substitute for FACTS. That goes for measuring advertising values or making laboratory tests of materials for your factory. When you buy advertising space in a publication you have a cash investment in every copy of the issue that carries your sales message. Obviously some of the people who receive the paper are better prospects for your goods and services than others. Thus the distribution of your advertising, via the publication, becomes a No. 1 factor in the success or failure of your investment. To appraise a publication's advertising value to your business therefore it is necessary to have all the facts about its circulation.

Factual information regarding the identity, quality and size of business paper audiences is available to advertisers in the reports issued by the Audit Bureau of Circulations. The Bureau, a cooperative association of 3300 advertisers, advertising agencies and publishers, has established standards for measuring circulations—maintains a staff of experienced circulation auditors to audit the circulations of publisher members—issues the information thus obtained in A.B.C. reports for space buyers to use in evaluating, comparing and selecting media.

The audited information in A.B.C. business paper reports includes the answers to these questions: **How much paid circulation? How much unpaid? What do subscribers pay? What is their occupation or kind of business? Were premiums used as circulation inducements? How many subscribers renewed? How many are in arrears? Where are the subscribers located?**

By using the audited information in A.B.C. reports in connection with market facts you can accurately judge media for its advertising value to your business. This business paper is a member of the Audit Bureau of Circulations. Ask for a copy of our A.B.C. report and then study it.

AMERICAN ARTISAN

The Word's Getting Around!

CHRYSLER AIRTEMP'S THE DEAL...

AND SMART DEALERS ARE JOINING UP THICK AND FAST! 44% MORE THE PAST 12 MONTHS!

YES — there's reason a-plenty why our dealer group is growing at a rate unprecedented in Airtemp history! Shrewd dealers have checked into the Airtemp story — they've investigated closely—and they've found that here's THE BIG DEAL in the air conditioning and heating field! Check what Airtemp offers—look it over point by point — and you'll find here's everything YOU want for more sales, more profits ahead. At best we can tell only *part* of the story on this page, so—after you've studied "The Basic 6" in the next column, send the coupon below and we'll rush you full franchise information. Write today!

IT'S AIRTEMP FOR THESE "BASIC 6" PROFIT-BUILDING FACTORS!

1. Products to Sell All Year Round
2. National Advertising and Sales Promotion
3. A Well-Known and Trusted Name
4. Products That Lead in Their Field
5. Factory-Trained Sales-and-Service Personnel—A Great Team!
6. Big Facilities for Volume Production

SEND TODAY FOR FRANCHISE DETAILS!

Airtemp Division of Chrysler Corporation, Dayton 1, Ohio

Please immediately forward me full details on the attractive, profitable Airtemp franchise agreement, and full details on the line and factory sales program.

CHRYSLER AIRTEMP

Name _____

Address _____

City _____ Zone _____ State _____

AA-1-50

Chrysler Airtemp

AIR CONDITIONING • HEATING • COMMERCIAL REFRIGERATION

Airtemp Division of Chrysler Corporation Dayton 1, Ohio

E-Z-ON

STANDARD and SNAP-TITE DAMPER REGULATORS

Famous E-Z-ON STANDARD DESIGN

Illustration about ¾ actual size.
Patent No. 2,285,829

SIMPLICITY ITSELF

No. 27. ⅜ inch bearing. Solid end tail piece. Packed one dozen in a box. List price $3.30 per doz. sets.

This is the famous E-Z-ON Standard Damper Regulator, so popular with sheet metal men because of the time it saves in making up rattle-proof dampers. Note absence of rivets, screws or cotter pins. Made of steel and heavily cadmium plated.

Extremely simple in application. Slip regulator over edge of damper so points of prongs are over scribed center line, lay assembly on block of wood for support and drive prongs through sheet metal with hammer. Now turn assembly over and clinch prongs. That's all there is to it. Prongs are strong enough to easily pierce 22 gauge metal.

INDICATING HANDLES

No. 26 Indicator handle. Steel cadmium plated. 3⅝ inches long. One dozen in a bundle, one gross in a box. List price 36 cents per doz.

For those who wish to use indicator handles to more clearly show position of damper, these handles are available. Fit both the No. 27 Standard and the No. 29 Snap-tite. Not included in regulator sets, but sold separately.

New E-Z-ON SNAP-TITE DESIGN

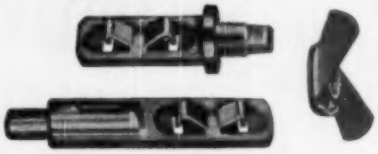


Illustration about ⅔ actual size.
Patent pending.

IMPROVED REGULATOR

No. 29. ⅜ inch bearing. Tail piece with snap end bearing. Packed one dozen in a box. List price $4.00 per doz. sets.

An improvement of the Standard E-Z-ON. The same simple means of attaching to sheet metal is used, but the tail piece has a retractable bearing. It is no longer necessary to bend the damper or spring the pipe to insert the damper. Simply insert the head piece through one hole and slide the end with the Snap-tite tail piece over the other hole and it automatically snaps through the hole and LOCKS, free of rattle.

E-Z-ON AND SNAP-TITE SETTING ANVIL

No. 25 Hardened steel, weight 1¾ lbs. One in a box with screws. List price $2.50 each.

This specially designed accessory will still further reduce time to assemble regulators. Operates on the principle of a rivet set. Measures 1 inch thick, 2 inches wide, 3 inches long. Drilled and counter sunk for attaching to shop bench, or heavy enough to use on the job without fastening down. Can also be used in kick press or power press. With this anvil one operation completely fastens and sets a unit.

SELF INDICATING—Position of damper is clearly indicated by tongue on headpiece. Tongue is parallel with position of damper at all times. Positive lock is accomplished by holding tongue with pair of pliers or wrench and tightening wing nut.

Prices subject to change without notice.

Manufactured by

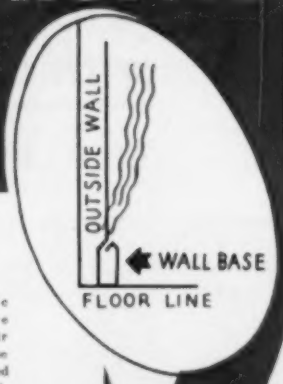
M. A. GERETT CORPORATION — MILWAUKEE 5, WIS.

Brandes WALL BASE *Heat*

PRODUCES *NEW* PROFITS

AVAILABLE NOW An entirely new, tested and proven concept in warm air heating. Brandes all metal base applies heat to the source of cold at the base of the outside walls, blanketing them with a layer of heat. This arrangement uses absolutely no room space, as it takes the place of regular wooden baseboard.

Here is a product that will bring you new customers, and high profits. Get the jump on competition with a product that sells itself with down to earth, common sense sales appeal that *customers* can see.



GET THE FACTS TODAY

NO MORE . . .

- **Cold Floors**
- **Cold Drafts**
- **Unsightly Radiators or Registers**
- **Blasts of Hot and Cold Air**
- **Problems of Furniture Placement**
- **Streaking or Dirtying of Walls**

The schematic drawing above shows heated air leaving wall base and being directed away from wall. Yet it remains adjacent to wall for thorough coverage.

Distributors and Manufacturers Representatives inquiries invited.

*Patent Pending

FOR FURTHER INFORMATION
ASK YOUR SUPPLIER
OR WRITE TO

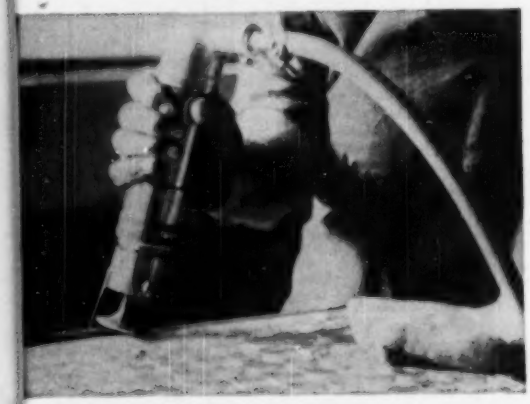
BRANDES COMPANY
2046 WINNEBAGO
MADISON 4, WISCONSIN

HAVE YOU EVER SEEN AN APPTON SUPER HAMMER SEAL A PITTSBURGH LOCK SEAM

WITH MAGIC SPEED AND SMOOTHNESS ?

Why pound away your profits with an old fashioned mallet?

CHIP - DRILL - GOUGE - RIVET - TRIM - CUT



Simply guide the hammer over the edge of the seam. Seals 4 times faster.

Drilling: More blows per minute. Light in weight. No trigger or recoil. Baffle control. Uses very little air.

DRILLING HOLES IN HARD BLUESTONE CONCRETE

⅛" Dia.,	1" Deep.	8 Seconds
½" Dia.,	1½" Deep.	12 Seconds
¾" Dia.,	2" Deep.	35 Seconds
1" Dia.,	2½" Deep.	62 Seconds

Our fifty years of experience in designing air tools are embodied in this amazing high-speed hammer which has become known in sheet metal shops throughout the country because one pleased user has told another. New type, no recoil construction — light weight — perfect control — contact operation.

The men like it because it spares their strength. The shop owner likes it because it greatly cuts time, and thus creates profits.

Slip off the Flattener and Guide, after you have finished sealing seams and take the hammer out on the job for every installation problem in cutting, chipping, drilling, trimming, gouging, small riveting, scaling and calking.

Write For Particulars — Immediate Delivery

●

THE BROWN-APPTON COMPANY

681 Fifth Avenue **New York 22, N. Y.**

"I can seal a pipe joint in 13 SECONDS this NEW, easy way"

"IT'S SO EASY to seal pipe with POLYKEN Industrial Tape No. 290! There is no paste, brush, mixing or mess, just a single material in a single size — a 1½ inch x 36 yard roll of self-sealing **Fiberglas*** tape! You strip No. 290 around the seam, cut the roll loose and the seam is sealed for good—all in less than 15 seconds! The finished job is neat, and the seal actually *improves* with age."

TAPE NO. 290 is outstanding for pipe sealing because of the two unusual materials that make it up:

1. **Fiberglas*** cloth backing—tough, super-strong, resistant to heat, corrosion and aging.
2. Flame-resistant, thermo-setting adhesive. Self-sealing on any sheet metal. *Vulcanizes* under operational temperatures.

Write Dept. T-1 today, or phone your distributor or jobber for full information on Tape No. 290 and other **Fiberglas*** tapes specially designed for heating, piping and air conditioning.

7 REASONS WHY TAPE NO. 290 SEALS PIPE BETTER

1. Speedy, safe, permanent seal
2. Sticks fast to any sheet metal
3. Absolutely non-corrosive
4. Increases structural strength of joints
5. No paste, no brush, no mixing, no mess
6. Clean, neat, permanent
7. *Actually costs less to install in many applications!*

*Fiberglas (Reg. U.S. Pat. Off. by Owens-Corning Fiberglas Corp.)

Polyken®

INDUSTRIAL TAPE

DEPARTMENT OF

BAUER & BLACK

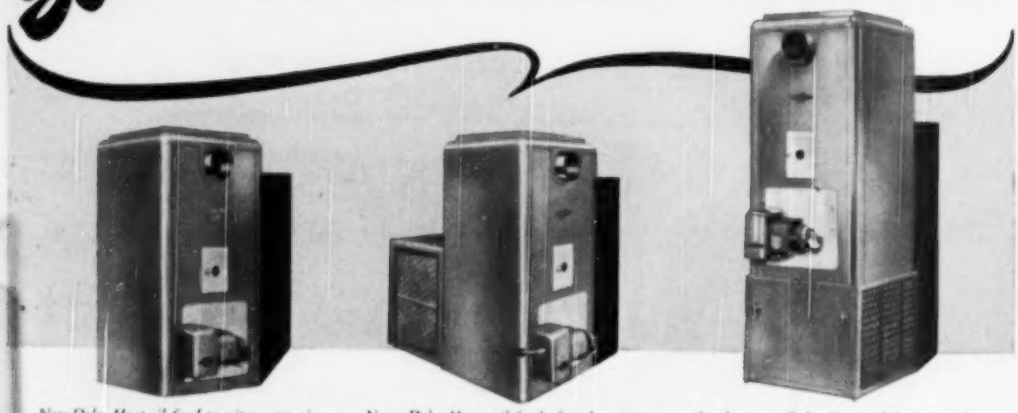
DIVISION OF THE KENDALL COMPANY

222 W. ADAMS ST., CHICAGO 6

Production Short Cuts to Reduce Costs • Research to Speed and Improve Methods

NOW! Sell the Small Home and Builder Market

with these NEW LOW-COST DELCO-HEAT CONDITIONAIRS



New Delco-Heat oil-fired gravity warm air furnace with a new and dependable vaporizing-type, forced-draft burner. A wonderful value! Now even the smallest homes can have all of the advantages of top quality automatic Delco-Heat—at low cost!

New Delco-Heat oil-fired forced warm air furnace—with (1) vaporizing-type forced-draft burner, or (2) Delco-Heat pressure atomizing burner with the exclusive "Rotopower" unit. For low-ceilinged basements and installations where head room is restricted!

Another new Delco-Heat oil-fired forced warm air furnace compactly designed for utility room and basement installations—or where floor space is limited. Available with (1) vaporizing-type, forced-draft burner—or (2) the famous Delco-Heat pressure atomizing burner!

Here are five brand new Delco-Heat oil-fired Conditionairs—especially engineered to meet the requirements of small home owners and builders! Five new Conditionairs—in both gravity and forced warm air models—with either vaporizing forced-draft or pressure atomizing-type burners! They're easy to install, easy to service—and because all models have the same "basic unit" construction, they're economical for you to stock!

Most important—these new Delco-Heat Conditionairs, with their many outstanding features, will give your *value conscious* customers exactly what they want in automatic home heating . . . dependability, comfort, convenience and economy!

These new Conditionair models are perfect companions to the other great Delco-Heat products—conversion Oil Burners, oil-fired Conditionairs, gas-fired Conditionairs, oil-fired Boilers, automatic Coal Stokers, and oil and gas-fired Water Heaters. Now the Delco-Heat line is more complete, more valuable than ever. Now, when you sell Delco-Heat—a real General Motors' value—greater profits can be yours, because:

1. You'll be selling a name that's a household word—a name synonymous with *value*.

2. You'll have a complete line of oil, gas and coal-fired home heating units.

3. You'll be backed by research and engineering that will keep the products you sell out in front.

4. You'll have the help of an advertising and sales promotion program that *really works!*

For full information about the advantages of a Delco-Heat franchise, write to Delco Appliance Division, Dept. AA-1, General Motors Corporation, Rochester 1, N. Y.

GENERAL MOTORS
DELCO-HEAT

Your Keys to Greater Profits

Delco-Heat Conditionair (Oil or Gas-fired)

Delco-Heat Conversion Oil Burner

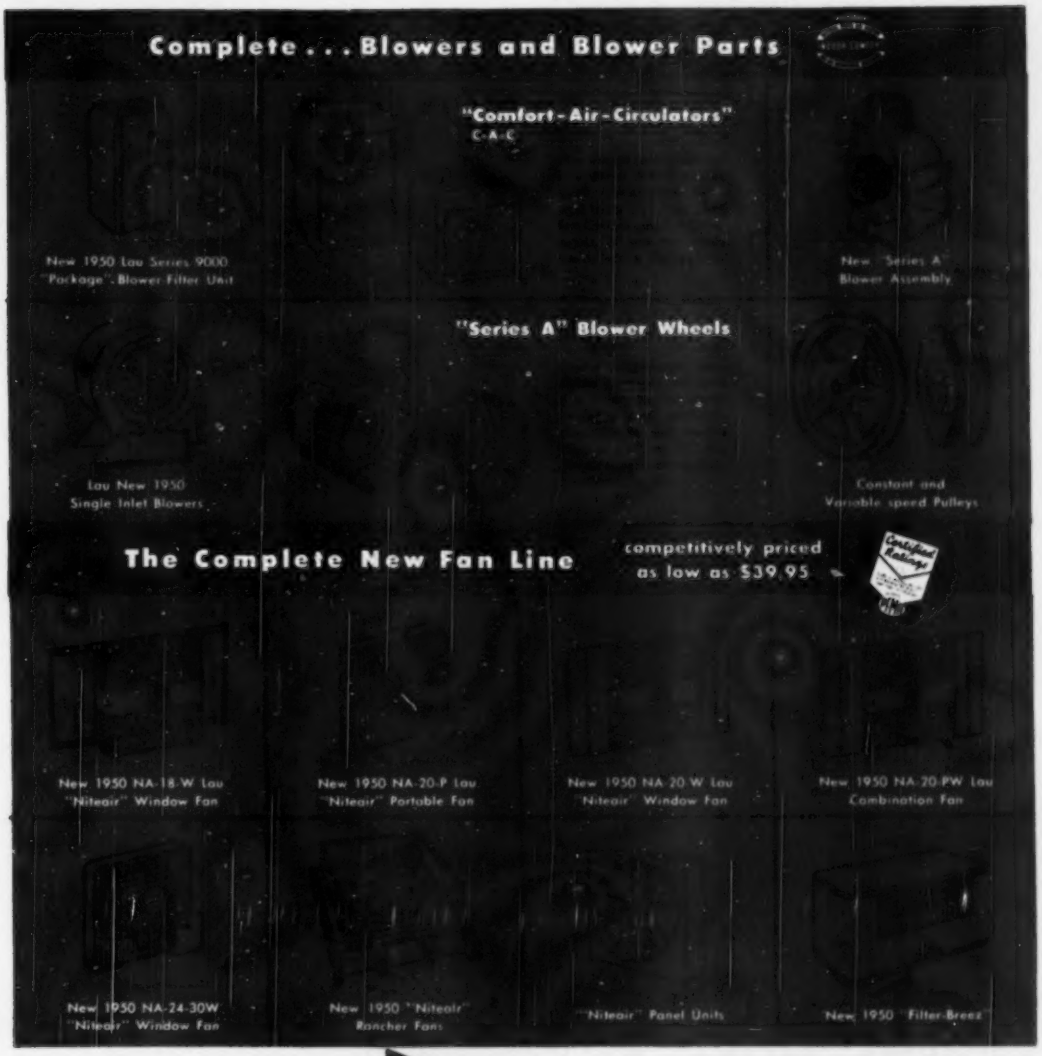
Delco-Heat Oil-fired Boiler

Delco-Heat Automatic Stoker

Manufacturers of Delco Water Systems for farms and homes—Fractional Horsepower Electric Motors—Electric Automobile Clocks

Covers the Field for '50

with expanded lines . . . greater values
newest features . . . low prices



. . . and Lau helps you sell more Fans . . . see your jobber get the details . . . get your complete Fan Selling Portfolio. It will make money for you!

THE LAU BLOWER COMPANY

Dayton 7, Ohio

WRITE DEPT. "A" FOR FULL INFORMATION

TRADE MARK

1950 will be a big year for the sale of gas heating equipment. The demand is growing steadily with the constant increase of natural gas facilities.

Make your plans now for the coming year. When you choose the equipment you sell look for quality first. If you want satisfied customers chose the best.

INVESTIGATE

WISE GAS FURNACES

BUILT FOR YEARS OF SERVICE
ECONOMICAL IN OPERATION
NEAT IN APPEARANCE

The heart of any heating system is the heating element or heat-exchanger. Wise cast iron heating elements are efficient and durable, designed for burning gas, not a makeshift construction. The Wise Furnace Company has manufactured gas designed furnaces for over forty years. Current models have stood the test of actual use. They are not in the experimental stage.

For complete information and exclusive sales franchise on Wise gas, oil, and coal furnaces write to:-

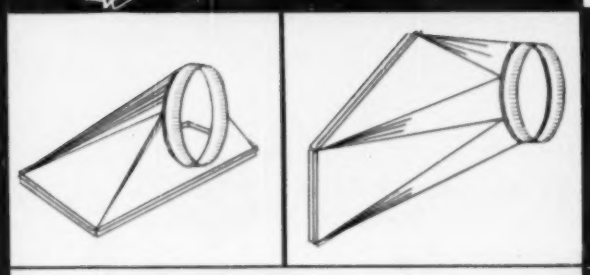
THE WISE FURNACE COMPANY
100 Lincoln St. **Akron, Ohio**

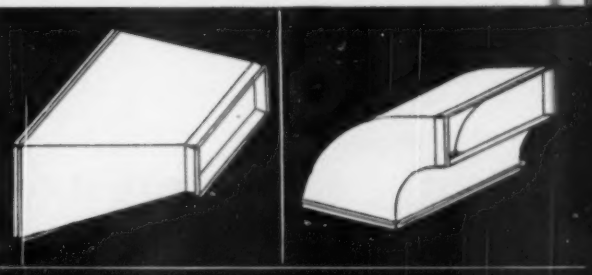
HANDY PIPE'S *Accurate Construction*

INSURES FITTINGS THAT KEEP YOUR LABOR COSTS DOWN!

Long years ago the engineers who designed the early HANDY PIPE recognized that accurate construction resulted in accurate, tight fittings that fit together properly, quickly and easily. . . . and all thru the years HANDY PIPE has been *designed* right, then *made* right — and it has always *fit* right. Workmen have never had to "fight" with it.

It is *still* made that way!





Take-Off Fittings **for use in forced warm-air winter air-conditioning extended plenum installations accurately and properly designed.**

These, like all their predecessors in the 83-year history of HANDY PIPE, are produced to help you more quickly and profitably install forced warm-air heating units.

F. MEYER & BRO. CO.

Established 1866

PEORIA 2, ILLINOIS

This is no joke—

FOR HIGHEST QUALITY USE

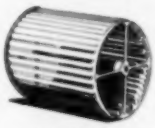
Viking

AIR CONDITIONING CORP.

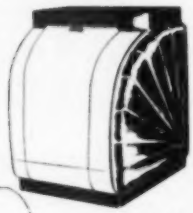
5607 WALWORTH • CLEVELAND 2, O.

FANS

HUMIDIFIERS


BLOWER WHEELS

BLOWER ASSEMBLIES


PACKAGE BLOWERS

CHICAGO
STEEL PRESS BRAKES

Known throughout the world for their sturdy all steel construction, Chicago Steel Press Brakes—Power Brakes and Hand Brakes—are the result of over 45 years' experience in developing and building these strong dependable machines for the fabrication of Sheet Metals.

Long life and trouble-free service are built into every machine from the Heavy Steel Power Press Brake to the Hand Bending Brakes.

STANDARD HAND BRAKE

The accepted standard in this class of Machinery. Used in the fabrication of Modern metals such as Stainless steel, aluminum alloys and high tensile alloys.

PORTABLE HAND BRAKE

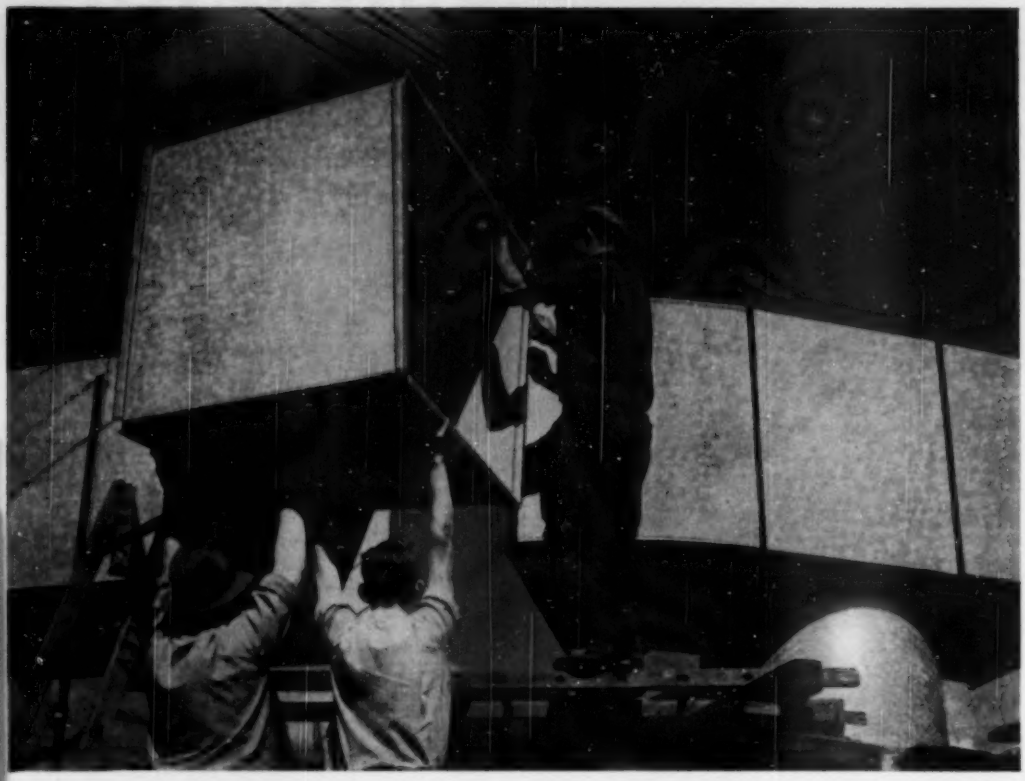
Not a bench machine. It is a Standard brake in every way, an ideal machine for general shop, trade schools, etc. Can be taken along on the job, for air-conditioning, etc.

BOX AND PAN BRAKE

A universal Box and Pan Brake that combines the features of the Universal Brake with the Box and Pan Brake as well as the Standard Hand Brake. Used in manufacture of Electric switch boxes, panel board cabinets, conveyor buckets, tote boxes, Radio Chassis, etc.

DREIS & KRUMP MANUFACTURING CO.

7404 LOOMIS BOULEVARD • CHICAGO 36, ILLINOIS



More rust-resistance for your money in Beth-Cu-Loy Galvanized Sheets

(made from copper-bearing, open-hearth steel)

The base metal used in Beth-Cu-Loy Galvanized Sheets is open-hearth steel containing 0.20 to 0.30 pct copper. Atmospheric exposure tests in various localities show that steel of this composition outlasts ordinary steel and open-hearth iron.

In addition to this long-lasting base, a tight, uniform coating of Prime Western zinc gives Beth-Cu-Loy Galvanized Sheets double defense against corrosion.

Though you might expect sheet metal of this quality to be costly, actually Beth-Cu-Loy Galvanized Sheets are priced at little more than ordinary galvanized sheets. This small difference in price is returned many times over in longer service and greater satisfaction to the customer.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation
Export Distributor: Bethlehem Steel Export Corporation

Beth-Cu-Loy Galvanized Sheets

BETHLEHEM STEEL

AFCO SINCE 1900

GEARED TO LEADERSHIP FOR FIFTY YEARS

Include AFCO in your plans for "50"

FOR $ PROFIT AND VOLUME, YOUR FURNACE LINE MUST . . .

1. Serve TODAY'S Requirements
2. Assure Customer Satisfaction
3. Lead Competition in Price and Value

AFCO OFFERS ALL THREE!

AFCO scientifically designed and skillfully engineered heating units are built in a range of sizes and models geared to satisfy every modern requirement. The AFCO dealer is certain of a greater share of business backed by sound merchandising policies plus a full line of consumer accepted equipment, top performance and complete satisfaction to buyer and seller.

THE AFCO LINE

SPACE HEATERS

Oil or gas fired suspended ceiling units for industrial installations.

Unit Heaters — Gas fired — Vented — Propeller fan forced air type.

GAS FIRED UNITS

AFCO Master Gas Units in Modern Air, Base Blo and Gravity Models with alloy steel heat exchangers.

Thermo Gas Units with sectional cast iron heat exchangers.

Gas Conversion Burners in a range of sizes for the smaller home and larger installations.

OIL FIRED UNITS

Oil Master in Modern Air, Base Blo and Gravity models with pressure atomizing gun type burner.

Vapor-Fire in three models with mechanical draft vaporizing oil burner.

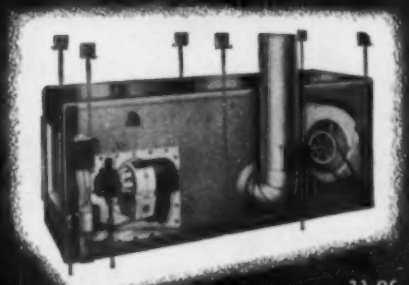
Airstream in counter flow air circulating design with atomizing gun type oil burner or semi-luminous flame gas burners.

Oil Conversion Burners

AFCO AND THERMO SOLID FUEL UNITS

Gravity and Modern Air Models — Round or square casings "700" Series — Steel heating units

"200" Series — Sectional Cast Iron Pipe and Pipeless models Stokers



23-OC

5-100BB

OM-90MA

700MA SERIES

JOIN AN ORGANIZATION PROUD OF ITS REPUTATION!

Write for complete information on any or all AFCO Products.

YOU WON'T GO WRONG WHEN YOU CHOOSE AFCO FOR GREATER PROFITS AND CUSTOMER SATISFACTION.

AMERICAN FURNACE CO.

2725 DELMAR BLVD. ST. LOUIS 3, MO.

OPERATES IN ANY POSITION—shaft up, down, horizontal, or any intermediate position.

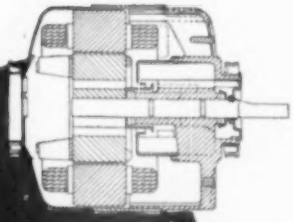
A new lubrication system constantly circulates oil between shaft and bearing, regardless of the position of the motor. Oil-saturated packing continuously feeds bearing with filtered oil—**no additional lubrication required throughout its long, service-free life.**

Quiet and light weight—extremely low noise level. Die-cast aluminum housing reduces weight. Bearing surfaces machined in one set-up—gives permanently true alignment.

Versatile—variety of mounting arrangements available; as well as variable-speed operation by using suitable controller.

Ask your nearest G-E sales representative for details.
Apparatus Department, General Electric Company, Schenectady, New York.

UNIT-BEARING MOTOR



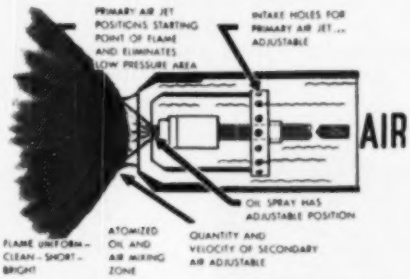
GENERAL ELECTRIC

Mr. Dealer:-

Do you want these advantages?

- **EXCLUSIVE FRANCHISE**
- **COMPLETE LINE OF WINTER AIR CONDITIONERS and CONVERSION OIL BURNERS**
- **WINTER AIR CONDITIONER with YEAR-ROUND DOMESTIC HOT WATER SUPPLY**
- **SPECIAL FEATURES**
- **REPUTABLE PIONEER MANUFACTURER**
- **PRICED RIGHT**
- **TOP QUALITY**
- **ENGINEERING AND SALES HELP**

- - - AND THAT AIN'T ALL!



Schematic diagram of Fire-Ball Combustion Head in position in the mouth of the blower tube. Air Vanes control the angle of the cone of primary air, which shapes flame.

Write today for full details regarding Exclusive Dealership in Your Community!

AUTO-HEAT

Manufacturers of OIL-FIRED BOILERS, FURNACES, BURNERS

New Field Street **Middletown, Conn.**

WHAT TO SAY WHEN HE SAYS,

"Naw, I can't afford Air Conditioning"

Well, it could stop you cold . . . lose you a sale . . . but not if you know about usAIRco's De-Hu-Matic and its terrific profit potential. That's the "only one of its kind" evaporative cooler that controls temperature and humidity both . . . and won't hurt the tenderest budget. Right now's the time to learn all you can about De-Hu-Matic for spring installation.

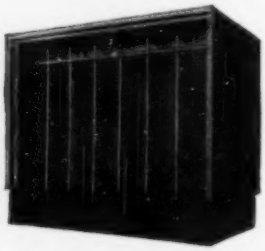
De-Hu-Matic has no coils or condensers or compressors . . . only the minimum of moving parts. There is practically no maintenance, and it saves important money still another way. It's a regular camel when it comes to water. A clever coupling of recirculating pump and thermo-humidifying controls regulates water according to weather conditions, and uses the same water over and over again.

Next time a prospect sings you the budget blues, just give him the word on usAIRco's De-Hu-Matic . . . wonderful comfort cooling, plus humidity control for a fraction of the cost of mechanical air conditioning.

De-Hu-Matic, the only evaporative cooling unit that controls temperature and humidity both . . . works in any climate even on muggy days.

Kold-aire, the evaporative comfort cooling unit that's simplicity itself. Cools, cleans, washes, filters and circulates 100% fresh air at surprisingly low cost.

Evaporative Kooler-aire, the cooling unit with exclusive Gyro-Spray that saturates and cleans filter mats automatically. Water recirculates for rock-bottom economy.



usAIRco Double Stage Air Washers clean, cool, humidify or dehumidify air. Water pressure as low as 25 pounds maintains complete coverage of mist across the entire spray chamber.

usAIRco Double-Mat Type Air Washers feature the famous Gyro-Spray which assures complete saturation of the first set of mats with a minimum amount of water and at the same time cleans mats to prevent clogging.

Dealerships still available in a few territories.
Write today for details.

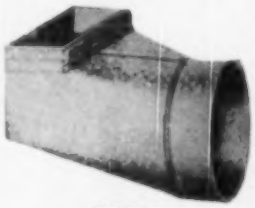
UNITED STATES AIR CONDITIONING CORPORATION

Como Avenue Southeast at 33rd. Minneapolis 14, Minnesota

MAKERS OF A COMPLETE LINE OF EVAPORATIVE COOLING UNITS FOR EVERY INDUSTRIAL, COMMERCIAL AND DOMESTIC APPLICATION

REGULAR ELBOW
STACK 90° #3

GALVANIZED
3 PIECE ANGLE 45°



FLATWAY
STACK-BOOT NO. 12

#113 TAKE OFF
DUCT BOOT

TRUNK LINE
NO. 105 15" ⅛

MADE-RITE

FURNACE FITTINGS . . .

true to the name!

WHY MADE-RITE

FURNACE FITTINGS ? ? ?

because

THEY'RE EASY TO INSTALL . . . .
A PERFECT FIT THE FIRST TIME

No cutting — no juggling
There's no order too small . . .
None too large
for
delivery on time

A connecting strip that will SAVE you TIME and MONEY. Made-Rite Patented Connecting Lock Strip for Quick and Air-Tight installations.

We solicit wholesale jobbing inquiries

No obligations

Drop us a line today for complete information

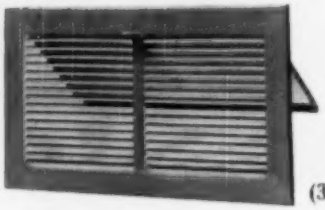
TRUNK
LINE

"Made-Rite"
COMPANY, INC.
10th & Monroe St., Newport, Ky.

A-J GRILLES

Star Performers

in thousands of buildings and homes



NO. 30

WALL REGISTERS

Install A-J registers on your next job and get: (1) A one piece welded assembly that speeds up installations. (2) Trouble free operation due to our one piece control handles that are permanently locked-in and welded. (3) Registers that do not make wall streaks because of our use of felt gaskets and horizontal face louvers. These registers are available in all standard sizes and in wall or baseboard styles.

SHEET METAL WORKERS AND JOBBERS!

WRITE IN FOR OUR NEW PRICE LIST AND CATALOG TODAY.

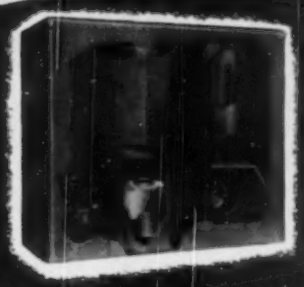
A-J MANUFACTURING COMPANY

Visit our Booths at the Dallas Show. Numbers 325 and 327

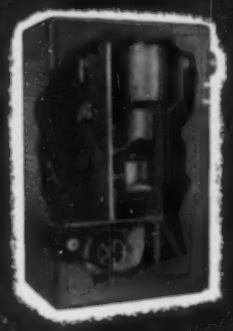
2119 WASHINGTON ST. Dept. B Kansas City 8, Missouri

It's what's inside the Casing that Counts

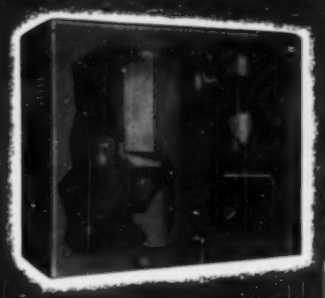
Gravity Warm Air—Comes in 6 sizes (22" to 26" diameter) Available with round or square casing. Easily convertible to forced air.



Model 151 Counterflow Air Conditioner—oil or gas fired.



Certified Counterflow Hi-Boy—Oil fired for small homes.



Model 222 Counterflow Air Conditioner—available in 8 sizes—for gas, oil, hand fired or stoker fired coal.

Certified MAMMOTH—winter Air Conditioner for large buildings—in 6 sizes for hand or stoker fired coal.

Whatever your warm air heating requirements, look to the Certified line . . . and remember, *it's what's inside the casing that counts.*

Years of heating experience and real engineering "know how" are incorporated in design features which guarantee you and your customer years of trouble-free and economical operation.

Unique in the Certified line is Permaweld construction which assures a lasting, rugged furnace that will not break down due to expansion and contraction . . . will not leak gas or smoke. It's a single, welded unit—built solid to stay solid.

Write now for complete information and specifications.

Certified HEATING EQUIPMENT

"The Quality Line of Warm Air Heating Equipment"

CERTIFIED FURNACE COMPANY

1000 BERRY AVENUE · ST. PAUL 4, MINNESOTA

Cancer's danger signals

1. Any sore that does not heal
2. A lump or thickening in the breast or elsewhere
3. Unusual bleeding or discharge
4. Any change in a wart or mole
5. Persistent indigestion or difficulty in swallowing
6. Persistent hoarseness or cough
7. Any change in normal bowel habits

Can be your safety signals

Cancer is curable if discovered early and treated properly

If any of these symptoms appear, see your doctor *at once*.

Write for the booklet about cancer. Just address your request to "CANCER".

AMERICAN CANCER SOCIETY, INC.

HOUSING PROJECT ECONOMY *starts with the* HEATING PLANT

FULLY AUTOMATIC!

Simply select temperature desired . . . the magic modulator valve does the rest!

NO ELECTRICITY NEEDED!

The new principle of Scotsman modulated firing operates independently of electricity . . . no expensive wiring necessary. Power failures cannot affect a Scotsman furnace.

ABSOLUTE SAFETY!

Completely approved by Underwriters' Laboratories. Fuel oil will not burn until vaporized in the burner. Write or wire today for complete information on this new furnace that cuts fuel plant costs to the bone.

NOW!

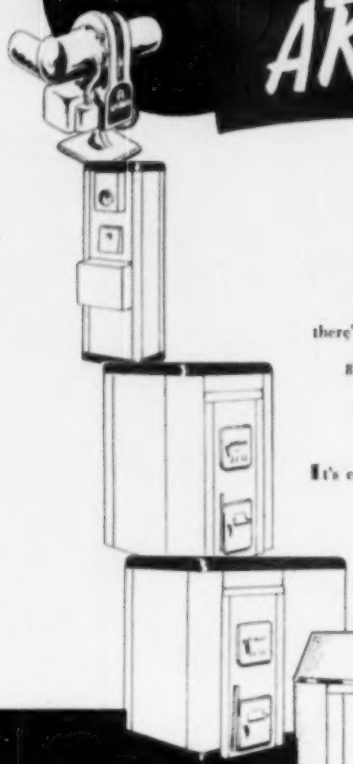
See the Scotsman Automatic Furnace at the American Gas Machine Company's permanent full-line display in the Chicago Merchandise Mart, 11th Floor, Room 108.

AMERICAN GAS MACHINE COMPANY
SCOTSMAN
ALBERT LEA, MINNESOTA

A product of
AMERICAN GAS MACHINE COMPANY
Albert Lea, Minnesota

there's an

ARMSTRONG

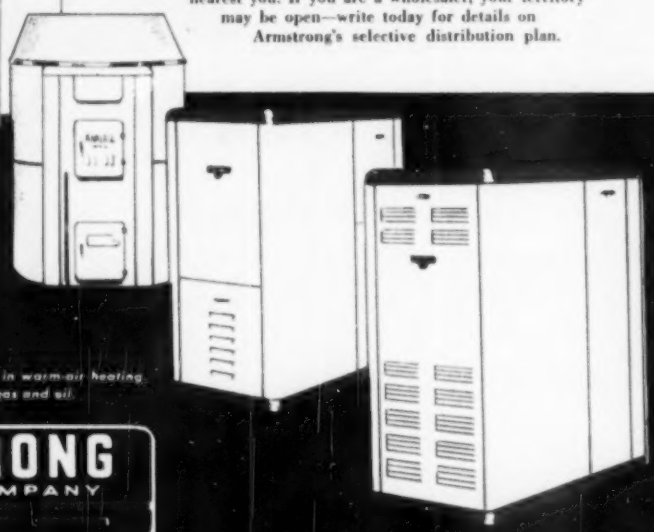


unit for every warm-air heating need

Large capacity or small—forced-air or gravity—oil, gas or coal—there's an Armstrong unit for every warm-air heating need or preference. In coal-fired units, Armstrong offers 37 models and sizes, ranging from 81,000 to 700,000 BTU at the bonnet. Gas-fired—furnaces in 10 models and sizes from 70,000 to 210,000 BTU input, and two conversion burners. Oil-fired—furnaces in seven models and sizes from 70,000 to 200,000 BTU at the bonnet, and four oil burners from ¾ to 10 GPH capacity.

It's easy to see the advantages of handling this complete line. With such a selection of units there's no need to call upon different suppliers for different furnaces. You can get everything you need in ONE line—from Armstrong.

Armstrong heating equipment is distributed to the installing dealer by authorized Armstrong jobbers. If you are a dealer, write or wire today for the name of the Armstrong distributor nearest you. If you are a wholesaler, your territory may be open—write today for details on Armstrong's selective distribution plan.



Look to Armstrong for leadership in warm-air heating. A complete line—coal, gas and oil.

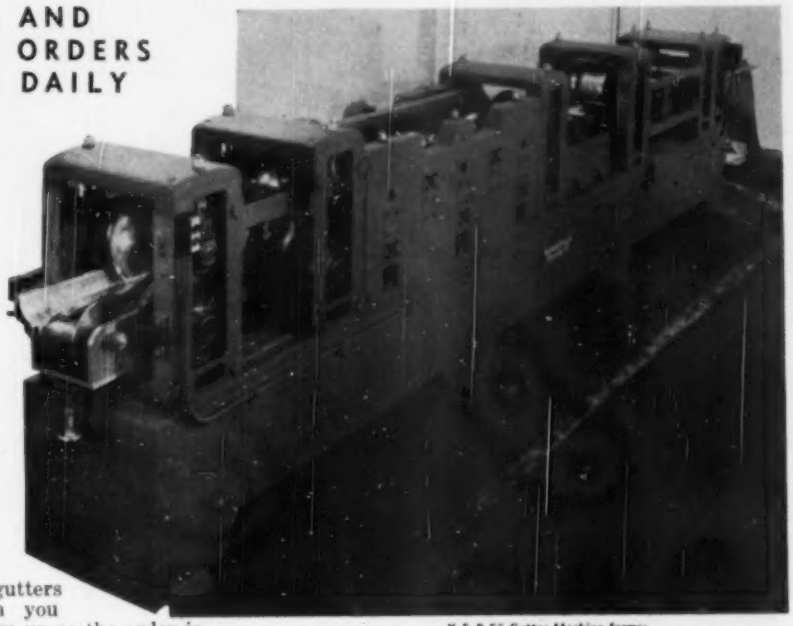
ARMSTRONG
FURNACE COMPANY

COLUMBUS, OHIO — DES MOINES, IOWA

KANE & ROACH
FORMING MACHINES

RUN GUTTER AND DOWNSPOUT ORDERS AS RECEIVED DAILY AT 100 FEET PER MINUTE

. . . and use your **STORAGE MONEY** *to pay for machines!*



K & R 5" Gutter Machine forms:
Single Bead, Slip Joint or Lap Joint—Hemmed Edge Gutters
Single Bead, Lap Joint—Snap Lock Edge Gutters.
Double Bead, Slip Joint or Lap Joint Gutters.

It's as simple as that! Why tie up a lot of space storing made-up gutters and downspouts when you may so easily make them up as the order is received and release the storage space for other uses, or do away with it entirely. K & R Downspout and Gutter machines will run off whatever you require at the rate of 100 feet per minute . . . you get instant service, quality workmanship . . . in one cost-reducing operation. And with a machine for each size no production is lost due to roll changes.

We also make straightening and bending rolls, cold roll forming machines, gang slitters, levellers, etc. . . . everything you need to put your shop on a production basis, with no increase in floor space. Investigate the superior K & R line today. A more complete listing of the items we manufacture is shown at right.

▶ ▶ ▶ *Please write us today for more complete information*

Other K&R *Products*

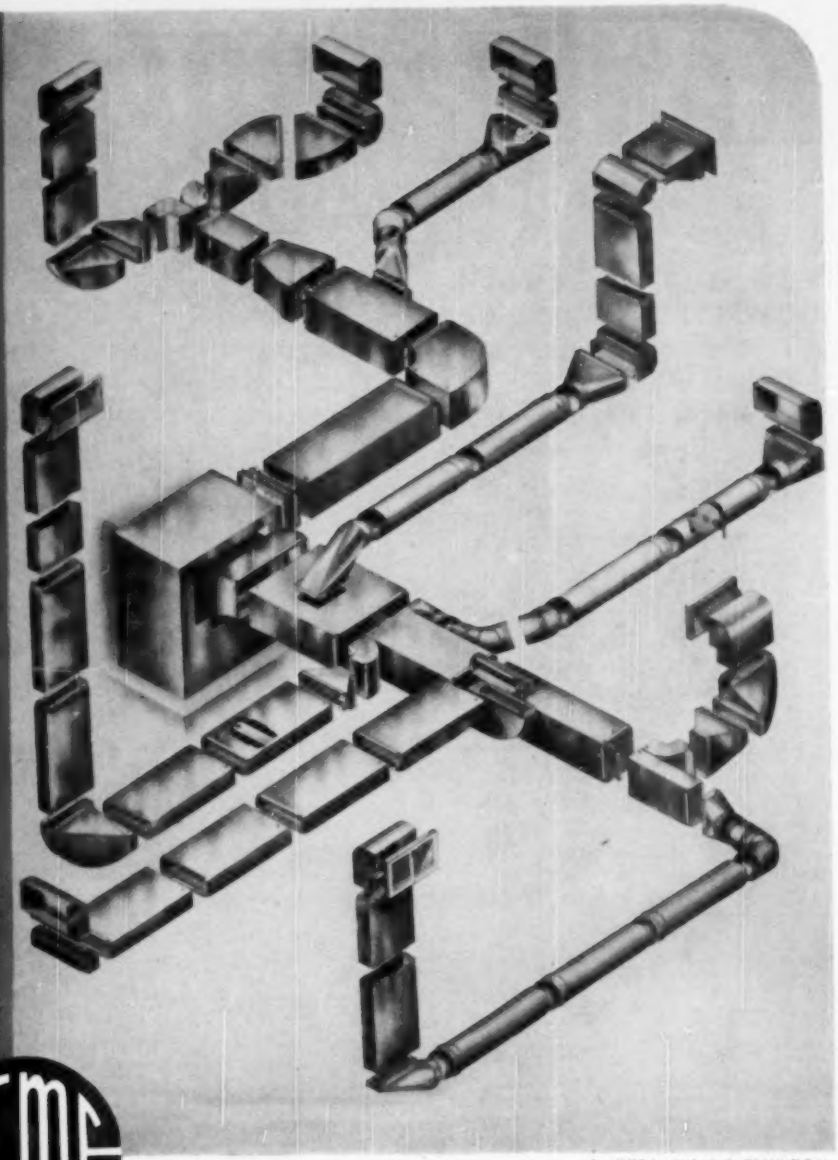
- ★ Straightening Rolls
- ★ Bending Rolls
- ★ Cold Roll Forming Machines
- ★ Gang Slitters
- ★ Flying Shears
- ★ Special Metal-working Equipment
- ★ Crimping Machines
- ★ Hydraulic Tube Benders
- ★ Hydraulic Bulldozers
- ★ Hydraulic Presses
- ★ Edging Machines

KANE & ROACH
INCORPORATED
NIAGARA and SHONNARD STREETS
Syracuse, New York

E-Z

Trade Mark Registered

as it looks!



Copyright 1949—Acme Manufacturing Co., Philadelphia 36, Penna.

with

ACME

• PREFAB DUCT AND FORCED AIR FITTINGS • DAMPERS

• FURNACE PIPE AND GRAVITY FITTINGS • DUCT HANGERS

• REGISTERS AND GRILLES

• DAMPER REGULATOR SETS

ACME MANUFACTURING CO.

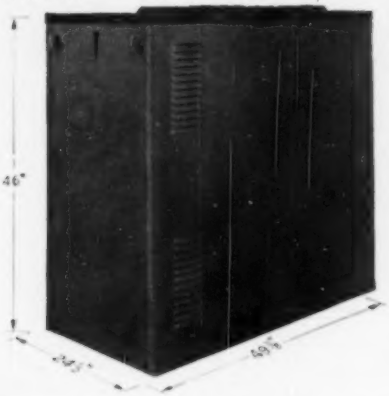
PHILADELPHIA 36, PENNSYLVANIA

MORE | SALES PROFITS SATISFACTION

with

Kaustine "Packaged" Heating Systems

LOW BOY



Produces 95,000 B.T.U. output at the bonnet with .85 nozzle—¼ H.P. Motor Driven 9" Blower—20" x 24" Air Filter —Warm and Cold Air openings 18" wide x 15" long—6" Flue Stack—Vestibule 10½" deep.

- Completely Assembled at the Factory.
- Minimum Floor Space Needed.
- Casing of Enameled Blue and Gray Hammerloid.
- Fire Pot of Chrome Steel.
- Priced for Your Profit.

HIGH BOY

Delivers 65,000 B.T.U. output at the bonnet with .65 nozzle—1/6 H.P. Motor Driven 9" Blower—20" x 20" Air Filter, 14" x 23½" Plenum Opening—6" Flue Stack. Furnished with side or bottom cold air return.

KAUSTINE "Packaged" Heating Systems offer a better deal from the standpoints of Greater Sales Volume, Higher Profits and Increased Customer Satisfaction.

High Boy and Low Boy "Packaged" Systems are the leaders for the entire KAUSTINE line of 10 Winter Air Conditioners, featuring heating capacities up to 270,000 B.T.U. at the bonnet.

"Packaged" Heating Systems are KAUSTINE-engineered for installation in cellars or utility rooms of today's development size homes. Thousands of these efficient systems in homes throughout the country, flood all rooms with comfortable, low-cost, trouble-free heat every day of the heating season.

Use the handy coupon to request KAUSTINE sales bulletins and prices.

KAUSTINE CO., INC. DEPT. 10-A, PERRY, N. Y.

Please send complete information and prices covering the KAUSTINE line of Winter Air Conditioners.

NAME .....

ADDRESS .....

CITY ..... STATE .....

BUSINESS .....

BACKED BY NATIONAL ADVERTISING
. . . BY MORE THAN 34 YEARS SERVICE
TO THE AMERICAN HOME OWNER

Kaustine
COMPANY, INC.
PERRY, NEW YORK

MODULATED WARM AIR FURNACES . . . SEPTIC TANKS . . . SEPTIC SEWAGE DISPOSAL EQUIPMENT . . . METAL TILE CONNECTORS . . . OIL AND GASOLINE STORAGE TANKS . . . HYDRO-PNEUMATIC AND WATER STORAGE TANKS . . . PRESSURE VESSELS . . . TRUCK TANKS . . . CUSTOM BUILT FABRICATED EQUIPMENT . . . TRANSFER PUMPS

"Sunny—it's cold outside..."

MOR-SUN
WARM AIR FURNACES
Forced Air and Gravity
for Gas and Oil

Speak of the Devil . . .

Allow me to introduce myself . . . I am a visiting expert on—ah—space heating . . . dropped in to look over this MOR-SUN.
Word gets around, you know.

If you'll excuse the expression — What the devil do you want with a MOR-SUN . . . I mean, considering where you're from?

Purely an urge to modernize, my boy —what with all the coal strikes, stokers' union and what have you . . . Primarily, I'm interested in B.T.U.'s — real heat!

Then your best bet's a MOR-SUN! Its heat exchanger gives out-of-this-world efficiency . . . no other heat exchanger produces as much heat from a given unit of fuel!

It sounds dreadfully expensive, and we haven't much of the long green . . . you know — that stuff about not being able to take it with you? It's so true!

Lucky Devil! You came to the right man . . . The MOR-SUN is as inexpensive to buy as it is to operate! That's because it's MASS PRODUCED! . . . a product of the same assembly-line production as today's automobile!

It also adds Beauty to your — er — Basement... but I don't suppose you're interested in that.

Ah, it is beautiful! But tell me—will it stand the gaff?

It's all 12-gauge steel! . . . a wholly post-war product of the latest techniques in die stamping!

I'm sold! Now you're in the unusual position . . . you'll have to tell the Devil where to go!

There are Morrison representatives all over the country, sir, or you can write to Morrison Steel Products directly!

Thank you, son. Look me up if you ever go to . . . er, g'bye . . . I hope.

MOR-SUN
WARM AIR FURNACES

"The Sun Never Sets with Morrison"

MORRISON

STEEL PRODUCTS, INC. • BUFFALO 7, N. Y.

DIE-LESS DUPLICATING

WITH di-acro PRECISION MACHINES

New! DI-ACRO VARI-O-SPEED POWERSHEAR

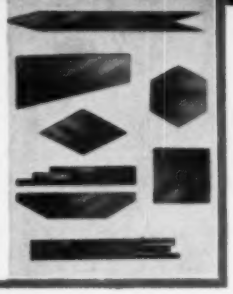
With shearing speeds from 30 to 200 strokes per minute, the DI-ACRO POWERSHEAR cutting cycle can be set for speed of maximum efficiency for each shearing operation. Continuous action eliminates clutch engagement for ease of operation and high speed production. Capacity 16 gauge steel. 2 sizes—shearing widths 12" and 24".

New! DI-ACRO HYDRA-POWER BENDER

This revolutionary, standard machine is quickly convertible into a "custom-built" unit exactly suited for each bending job. Forms simple, compound and reverse bends in tubing and all solid ductile materials. 2 sizes—radius capacity 9" and 22".

DI-ACRO SHEAR

Rapidly shears or squares ductile and pliable materials to die accuracy. Also cuts slits, strips, notches. Capacity 16 gauge steel. 4 sizes—shearing widths 6", 9", 12", 24". (Examples of parts at right.)

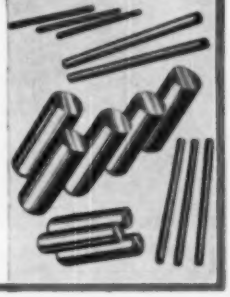


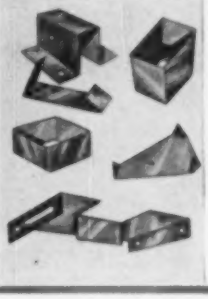
DI-ACRO BENDER

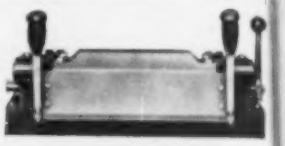
Makes simple, compound and reverse bends for "DIE-LESS DUPLICATING" of an unlimited variety of parts in tubing, angle, channel, rod, wire, molding, strip stock, etc. 4 sizes — capacity 1/8", 1/4", 1/2", 3/4" steel bar. (Examples of parts at left.)

DI-ACRO ROD PARTER

Accurately "parts off" round materials without distortion at production speeds. 2 sizes—capacity 1/2" to 5/8" and 3/4" round steel bar.







DI-ACRO BRAKE

Replaces dies for experimental or production forming of both simple and intricate parts. Capacity 16 gauge steel plate with forming widths of 6", 12", 18", 24".

DI-ACRO PUNCH

Punches holes of variable shapes up to 4" diameter—also serves as a precision punch press for blanking, forming, drawing. 2 sizes—throat depths 6 1/4" and 12 1/4".

DI-ACRO NOTCHER

Eliminates need for punch press and dies on many notching operations. Cuts 90° notches up to 6"x6" in 16 gauge steel in one operation.

DI-ACRO (pronounced "DIE-ACK-RO")

DI-ACRO PRECISION MACHINES DIE-LESS DUPLICATING

O'NEIL-IRWIN MFG. CO.

394 EIGHTH AVENUE • LAKE CITY, MINN.

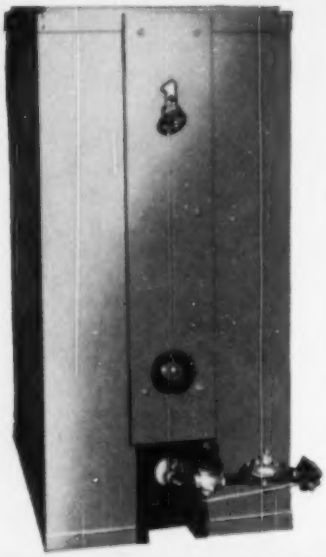
Send For 40-Page "DIE-LESS" DUPLICATING Catalog

Jackson & Church's

*Four-in-One** BUDGET

designed to grow with the hom

oil or gas



Here's a brand new heating idea . . . a winter air conditioner, for gas or oil, designed by J&C engineers, that requires the addition of only a component package to make it either an 85,000 . . . a 100,000 . . . a 112,000 . . . or a 120,000 Btu output furnace.

FOUR FURNACES IN ONE! It can actually grow with the home. Start with a four room home, and as the family and income increases . . . enlarge the home without changing furnaces. Simply change a small, low-cost package and increase the output of the J&C "Four-In-One" to meet increased heating needs.

The "Four-In-One" is a quality unit . . . with 12 gauge heat exchanger, top quality cabinet and burner, and fully automatic controls.

An original design . . . engineered, warranted and built by Jackson & Church Company.

J&C . . . *AMERICA'S LARGEST AND MOST COMPLETE WARM AIR HEATING LINE* . . .

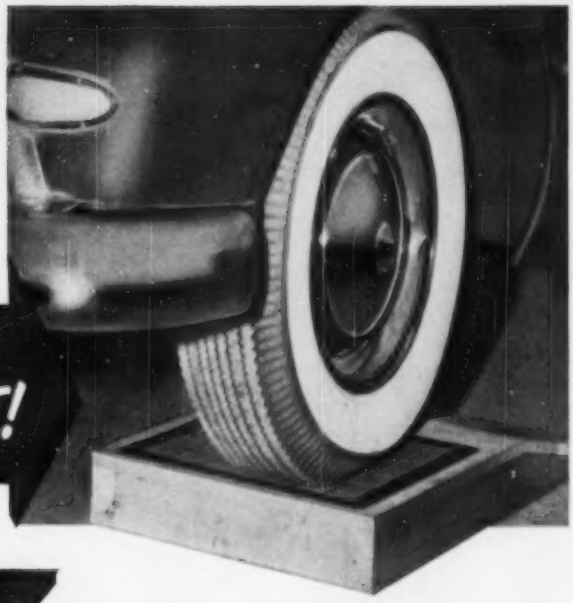
JACKSON & CHURCH CO. SAGINAW, MICHIGAN

"Work well done since "81"

Lima

"WORLD'S STRONGEST FLOOR REGISTER"

AND THIS CRUSHING TEST PROVES IT!



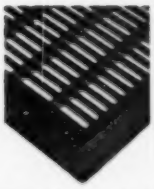
BEFORE

AFTER

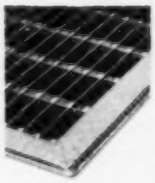
Talk about STRENGTH! Look what happened when the front wheel of an automobile was driven onto a Lima Floor Register! It was scarcely bent, as these graphic before-and-after photos reveal . . . proving that Lima Floor Registers will stand up under virtually all conditions of wear and abuse! The secret? Solid, one-piece, *welded* steel grids and frames . . . plus "smash" welded corners, off-set for extra rigidity!

Talk about BEAUTY! Lima Floor Registers are sleek and smooth, finished in new *Duragold*, a rich, gold-hammered appearing finish that harmonizes with all floor treatments. So resistant to high temperatures that wear is hardly detectable even after *3 years under heavy traffic!* Also available in smart oak grain finish. Available in all popular sizes and any quantities. Prompt delivery. Order today.

NO EXTRA COST FOR THESE EXCLUSIVE LIMA FLOOR REGISTER FEATURES!



Smooth, seamless face with smash-welded corners! No unsightly angles!



Wear-resistant Duragold finish harmonizes with any floor treatment.

Crossed-girder grille . . . bars resistance-welded at every joint for strength!

SAVE TIME, LABOR AND MONEY with *Lima* WALL REGISTERS

Exclusive "*Balancing Bell*"* control slashes hours from installation time because it eliminates quadrant dampers, simplifies balancing! *One man* does the job, *does it better.* No more service calls for re-balancing because homeowner can do it himself! Smart, streamlined, electrostatically painted, Lima Wall Registers are truly the world's *finest!* Fill your stocks now!

*Patent applied for

THE *Lima* REGISTER COMPANY
LIMA, OHIO

SEND COUPON TODAY!

LIMA REGISTER COMPANY
651 N. Baxter Street, Lima, Ohio

Gentlemen:
Please send me free descriptive material on the complete line of Lima registers and faces for installation in walls, baseboards and floors.

Name _____

Address _____

City _____ *Zone* ____ *State* _____

ABC OIL BURNERS

MORE EFFICIENT... for every purpose
MORE SALES APPEAL... for every prospect
MORE PROFITABLE BUSINESS... for you

• For Home Heating... ABC Model 52A

This newest, finest result of ABC's 29 years of oil burner experience enables you to offer every oil burner advantage—and more! It is equipped with the famous, exclusive ABC choke and spinner. Special ABC Coupling helps give unmatched, vibrationless operation. Feature the Model 52A for more years of satisfactory, trouble-free service. Capacity 0.6 to 6.0 GPH.

• For Packaged Heating Units... ABC Model 55

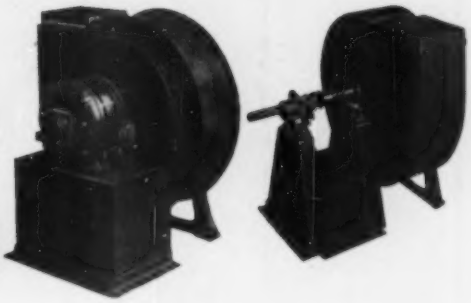
The economical, efficient solution to rising costs and performance problems for boiler, furnace and water heater manufacturers. The Model 55 is more compact, lighter in weight, and designed for easy installation and servicing. Features a transformer that swings aside for easy withdrawal of drawer assembly and 10 second nozzle removal. Especially adaptable to short vestibules. With all the exclusive ABC engineering advancements. Capacity from 0.6 to 3.5 GPH.

• For Commercial Installations... ABC Model 53

Delivers from 700,000 to 2,520,000 BTU for safe, dependable, economical oil burner performance in small to medium sized factories, schools, churches, hospitals and similar installations ... or where heat is needed for commercial and industrial processing. The Model 53 has dual ignition and dual nozzles, an electrically operated bypass valve for quick, sure shutoff, hinged transformers, built-in safety combustion control which eliminates the need for any stack relay and many more original ABC features. Available in 2 sizes: 5 to 12 GPH and 7 to 18 GPH.

AUTOMATIC BURNER CORPORATION
1823 Carroll Avenue • Chicago 12, Illinois

Bayley "CUSTOM BUILT" FANS



OTHER TYPES
FOR ANY FAN DUTY

TYPE "EX" FOR BLOW PIPE SYSTEMS AND INDUSTRIAL EXHAUST

TAILORED to suit the individual needs of each job.

SIZES from 15 to 80 and larger. Up to 30,000 CFM or more. Pressures to 15" W.G.

STANDARD Arrangement No. 1 fans available for immediate delivery, in sizes from 20 to 50 inclusive.

SPECIAL fans for high temperatures, corrosion resistance and other exacting requirements.

ADVANCED design provides maximum long-lasting efficiency. Wheels balanced statically and dynamically.

ACCEPTED by leading contractors and users because of their dependability, economy and proved performance.

ASK for complete information. Bulletin 41EX gives full-range capacity tables and useful information for design of blow-pipe and exhaust systems.

CONSULT US ON YOUR ENGINEERING PROBLEMS

BAYLEY BLOWER CO.

1817 SOUTH 66TH STREET MILWAUKEE, WISCONSIN

SUPER SAW

Fits ¼" - 5/16" electric drill, air drill, flexible shaft.

AIR COOLED

With this tool you make enough savings to quickly pay for it.

PATS. PEND.

You Can

Cut Your "Roughing In" Costs 75% with the new Super-Saw

SUPER-SAW saves you time, money and trouble because it is fast and economical in operation. Its frictionless bearings allow more power from the drill to be delivered to the cutting blade. The absence of torque and spin, and the blowing attachment which keeps it cool and also blows away sawdust and chips from the cutting line eliminate wasted time and effort. All parts of SUPER-SAW—its shafts of Carpenter Solar Steel, its saw guide of stainless steel, its connecting rods Evidure Phosphor Bronze 88444 Alloy—are precision built and held to close tolerance, assuring long and economical wear. There is no need to drill a starting hole for SUPER-SAW as this tool cuts directly into wood floors, walls and siding. For example, openings for warm air heating can be "roughed in" in 12 minutes and a hole for setting toilet can be made in 5 minutes. With SUPER-SAW special shatterproof, flexible, blades—which are inexpensive—it cuts through nails without injury to the teeth of the saw. See this really super tool for yourself at better jobbers in the U.S.A. or Canada or you may write to us for free, illustrated booklet.

See Super-Saw in Action at –

Booth #11
Convention of National Roofing Contractors' Association
Chicago, Illinois

Booth #829
Southwest Air Conditioning Exposition
Dallas, Texas

Booth #207
Plant Maintenance Show
Cleveland, Ohio

R. C. S. TOOL SALES CORPORATION

Chalstrom Bldg. . . . . Joliet, Illinois

With this *New* Line of

FRONT RANK

Automatic HEATING UNITS *Gas or Oil*

...ESPECIALLY ADAPTED FOR SMALL HOMES

YOU'LL BE *First in Sales!*

F-R UTILITY ROOM HI-BOY AIR CONDITIONER

Engineered for owner's choice of gas (any type) or oil. Burner is an integral part of the designing, making for maximum heating efficiency at minimum cost. Unit is factory equipped and tested with Controls, Filters, slow speed Blower, etc. Designed for the Utility Room and to save valuable space. Beautiful baked green two-tone Splatter Finish.

MEMBER INDOOR COMFORT

F-R GRAVITY FURNACE

Both efficient and attractive appearance. Incorporates all the highly desirable FRONT RANK features which have made F-R gravity furnaces the leaders in customer satisfaction for 60 years. Basement model, for either gas or oil, and adapted to forced air efficiency with the addition of a F-R Blower. Beautiful baked green two-tone Splatter Finish.

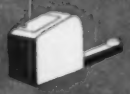
F-R FORCED WARM AIR CONDITIONER

Basement model engineered to afford greater heating efficiency through the combustion chamber and the unusually large heating surface and flue travel. Oversize Blower is quiet and insures a gentle flow of warm air throughout the house. Fully automatic and is adaptable for either gas (any type) or oil. Beautiful baked green two-tone Splatter Finish.

FRONT RANK

THE LINE IS COMPLETE

FRONT RANK Winter Air Conditioner has proven [illegible] of service.



FRONT RANK Stoker burns low-priced coal — fits any type furnace, boiler.

FRONT RANK Blower-Filter Unit attaches to any type furnace.

FRONT RANK Oil Burning Unit—automatic oil heat with winter air conditioning.

2500 OHIO AVE. **FRONT RANK FURNACE CO.** ST. LOUIS 4, MO.

New for '50

THE MOST COMPLETE FRANCHISE

in the entire

AUTOMATIC HEATING and COOLING FIELD

featuring the famous

Gas-A-Fire

FURNACES AND BURNERS

Automatic Firing Corporation

ST. LOUIS

At last! That kind of franchise that gives you the flexibility you want. This complete line of gas furnaces and burners puts you heads up and ready for the record shattering gas season just ahead. There's automatic equipment . . . a full line . . . for oil and coal, too. Not only that, but right from the same source you get a complete range of room coolers and package units as well. Think of the advantages this offers. Get set now. Get Automatic Firing Corporation's franchise story.

GIVES YOU . . .

- THE FAMOUS GAS-A-FIRE LINE THAT MEANS READY-MADE SALES IN THE DOMINANT GAS HEAT FIELD
- OIL-A-FIRE AND STOK-A-FIRE FOR YOUR OIL AND COAL HEAT CUSTOMERS
- SOMETHING NEW IN ROOM COOLERS AND PACKAGE UNITS
- PROTECTED DEALERSHIP
- LOW STOCK INVESTMENT
- UNUSUAL COMPETITIVE PRICE POSITION
- PROFIT-MAKING MARKUP
- DIRECT FROM FACTORY TO DEALER
- STRONG PROMOTIONAL SUPPORT

WRITE, WIRE OR PHONE TODAY

Automatic Firing Corporation

4417 OLEATHA, ST. LOUIS 16, MISSOURI

Send details about Automatic Firing Corporation's dealer franchise on the complete line of automatic firing equipment.

NAME _____

FIRM _____

STREET _____

CITY _____ Zone _____ STATE _____

BAROMETRIC DRAFT CONTROLS

A MODEL FOR EVERY PROSPECT

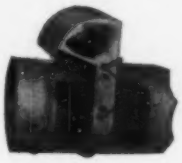
Draft Korektor Type F
No. 904 - No. 905 - No. 906. For stoves and heaters. Furnished in 4, 5 or 6-inch sizes. Shipped as shown with long tee side.

Draft Korektor

The Draft Korektor is a low cost, open check draft control for the huge domestic market. Ideal for coal installation, automatic or hand fired. New finger-tip outside adjustment. Large unrestricted opening, non-clogging pivots, factory balanced ready for easy installation. 10% to 25% fuel savings.

Draft Korektor No. 549
Furnished in sizes to fit all domestic pipe sizes. Close fitting blade, knife-edge pivots, sensitive to slightest air movement.

Cole Draft Governor



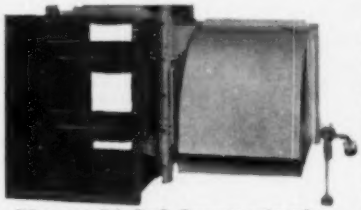
Domestic standard round Cole Draft Governor, sizes 5" and up.

The Cole Draft Governor holds draft to the IDEAL MINIMUM for clean efficient combustion effecting fuel savings up to 30%.

For oil, coal and gas-fired heating and power plants, domestic, commercial, industrial—any size.

Fully automatic, accurately balanced at factory. Can be installed on any angle without taking down pipe.

Standard 5" and 6" space heater control. Type A, as shipped.



Side mount Cole Draft Governor rectangular, any size, shown installed in breeching.

Cole-Sewell specializes in building a complete line of Barometric Draft Controls which enables you to serve your customer's requirements. Models for every type and size of installation. Expertly designed and carefully built to give years of trouble-free operation. Your inquiries are invited—ask us for details and quotations.

Side mount round Cole Draft Governor, size 14" and over.

Sullivan Draft Stabilizer

Industrial standard Sullivan Draft Stabilizer.

For stoker or oil burner operation. Can be mounted on either side or top of pipe. Models for all standard domestic pipe sizes from 7" through 18"—and for any size or type industrial installations.

Moving parts perfectly counter-balanced at factory. Domestic sizes equipped with self-lubricating bearings. Industrial controls furnished with ball bearings.

Industrial standard square Sullivan Draft Stabilizer.

COLE-SEWELL *Engineering Co.*

2282 UNIVERSITY AVENUE **ST. PAUL 4, MINNESOTA**

With All Its Advantages You Pay No Premium Price for THARCO!

1st CHOICE of Both FURNACE MANUFACTURERS AND CONTRACTORS

DEFINITELY SUPERIOR — and Here's Why:

1. **SMOOTH AS SILK** — can be applied faster — no lumps, no wastage.
2. **NO SHRINKING**, cracking or checking — *positive guarantee* of leak-free furnaces.
3. **STAYS PUT** — greater adhesion to metal parts due to secret Armstrong formula.
4. **LASTS LONGER** — *permanent* bond not affected by short firing cycles and rapid temperature changes.

HANDY-ALL Ready to Use!

Meets Every Need — New Jobs, Repairs and Replacements

THARCO furnace cement is conveniently packed in metal containers — sizes to suit every need —from 1-lb. cans to 350 lb. drums. TRY IT — your jobber can supply you, or write us at Chicago, Detroit or Dallas.

2500°- CONTINUOUS OPERATION

THARCO is the *one* furnace cement that "can take it." Ordinary furnace temperatures run 1500° to 1800° — yet, at Detroit Edison, THARCO is being used successfully at temperature of 2500°, 24-hour-day operation. No kick-backs, complaints, *no doing the job twice* — when you use Armstrong THARCO!

THE ARMSTRONG COMPANY

241 SOUTH POST STREET — DETROIT 17
4065 SOUTH LA SALLE STREET — CHICAGO 9
2411 SWISS AVENUE — DALLAS 1

Sales are Sweet . . . Satisfaction's Complete . . .

with **TORIDHEET**

It's the Pioneer rotary wall flame oil burner!

- A burner that's *"not alike!"*
- Sales opportunity's *"different"*, too!
- And behind the burner —a *special reputation!*
- Plus 26 years of *research and development!*

Investigate and compare the profitable, satisfying Toridheet "Deal for Dealers!"

TORIDHEET DIVISION
CLEVELAND STEEL PRODUCTS CORP.
7800 MADISON AVE. • CLEVELAND 2, OHIO

"Your Home's Complete with Toridheet"

A TORIDHEET UNIT
- for every need
- for every fuel
- for every budget

COMPLETE HEATING PLANTS, OR CONVERSION UNITS

Get "VERDICT", the book that users wrote to say "WE'RE SATISFIED!" Sent free on request— write Dept. A, Toridheet Division

CLEVELAND
Toridheet
AUTOMATIC HEATING

Here's Your Directory of Quality Sodering Supplies

ALLEN SPECIAL

STAINLESS STEEL SODERING FLUX

(Item 5)

Here's a remarkable, fast flux that makes the sodering of stainless steel as easy as sodering tin plate. (Also available in a special odorless formula where less strength is required). "ALL-SOL" works with all soders but for best results use **Allen** stainless steel soder. Pints, gallons.

ALLEN SODERING SALTS

(Item 1)

An all around flux in convenient powder form; just add water 3 to 5 times according to metal to be soldered. Solders all metals but aluminum. Takes a quick bite and makes the soder hold on. Non-acid. Comes packed in metal or glass as preferred. ¼ lb., 1 lb., 5 lb. sizes.

ALLEN ALL-METAL SCRATCH BRUSHES

(Item 13)

A remarkable brush for speedily removing rust, corrosion, brightening metal. Brush is all metal, hence can be used under torch flame, etc. Brush can be cut off at end, thus renewing life as front end wears down. Bristles of tough, strong steel. Three brushes like illustration. Also one all metal brush, "straight-construction" for battery work, etc. Large, medium and small sizes.

ALLEN SODERING OIL

(Item 4)

A highly technical, concentrated sodering compound officially endorsed by the National Underwriters.

Causes neither verdigris nor corrosion. Gets into the tiniest crevice and takes the soder along with it. Makes perfect electrical and mechanical joints. For hand or machine sodering. Excellent for sweat sodering copper pipe joints. 1 lb., 3 lb., and 12 lb. sizes.

ALLEN SOLID SAL AMMONIAC

(Item 11)

Speedily cleans and brightens the sodering copper. Outlives fibrous lump many times.

Six sided, solid, convenient. Does not crumble, nor corrode metal work, nor tools on the job.

ALLEN Galvanized Iron SODERING ACID

(Item 7)
(Formula G. I.)

An active sodering acid for galvanized and hard-to-soder metals; and old metal that has been exposed to the weather. Works well on monel metal (white label shipping regulations). Quarts and gallons.

Note: For "all-a-round" sodering on new and fairly clean work use **Allen** Sodering Liquid (see No. 6 below).

ALLEN ALUMINUM SODER

(Item 18)

Allen Alumi-Soder is a complete soder and flux contained. Requires only heat to permanently join aluminum to itself or other metals. Comes in ⅛" square wire form and triangular ¼ lb. and 1 lb. bars. Also in popular trial size pieces, called 9 inch pieces. ¼ lb. and 1" bar and wire form.

Also soders cast-iron.

ALLEN SUPERTITE ACID SWABS

(Item 12)

Deep set bristles of good quality held tightly in heavy gauge holder; securely crimped, no jagged edges or rough metal exposed. No. 2 and No. 1 sizes.

ALLEN SODERING LIQUID

(Item 6)

Standard Formula. For all-a-round work, for all metals save aluminum and stainless steel.

17,000 pounds to the square inch with no gumming, fumes, or corrosion. Double strength, non-evaporating. Works like Lightning. Adaptable to hand or machine sodering. Excellent for tinning the sodering copper. 2 oz. 4 oz., quarts and gallons.

ALLEN SODERING PASTE

(Item 2)

Standard Formula. Safest sodering paste made—fast working—a convenient corrosion-free, soft form of flux. Adheres to the surface while you soder. Assures secure electrical and mechanical joints. Saves time. Triples strength of the soder. Makes soder self fluxing. Official National Underwriters Laboratory approved listing. 2, 4, 8, 16 oz.

ALLEN EZY-FLO Torch Formula Sodering Paste

(Item 2-A)

A special soldering paste for torch and "sweat joint" sodering. Also works well with the soldering iron. Comes in same sizes and at same prices as "Standard Formula." 2, 4, 8, 16 oz.

SILVER SODER

WIRE AND RIBBON FORM

(Item 15)

Wire form for all around work. Excellent tensile strength, high vibration and corrosion resistance. Gives rigid, good color joint.

Ribbon form same specifications as wire. (For band saw **Wire Form** work.)

FLUX FOR SILVER SODER

(Item 15-A)

Provides quick, smooth flow giving deep sound silver soder penetration on most metals including stainless steel. 1 lb. and 5 lb. sizes.

Send Your Letterhead!

Tell us what samples you want and what metals you soder — We will include with the samples no charge our new Jr. size *all metal* scratch brush.

FREE INTRODUCTORY OFFER

Check Samples Here
(Attach to your letterhead or list some on your letterhead)

Item

- ☐ 1 Sodering Salts
- ☐ 2 Sodering Paste
- ☐ 2A Ezy-flo Torch Formula Sodering Paste
- ☐ 4 Sodering Oil
- ☐ 5 Stainless Steel Sodering Flux
- ☐ 6 Sodering Liquid
- ☐ 7 Galvanized Iron Sodering Acid
- ☐ 11 Solid Sal Ammoniac
- ☐ 12 Supertite Acid Swabs
- ☐ 13 All-Metal Scratch Brushes
- ☐ 15 Silver Soder—Wire and Ribbon Form
- ☐ 15A Flux for Silver Soder
- ☐ 18 Aluminum Soder

L. B. ALLEN CO., Inc.
6702 Bryn Mawr Ave., Chicago, 31, Ill.

THE COMBI-MATIC

SWITCHES FROM OIL TO GAS Automatically

The Siemon "Combi-Matic" provides an uninterrupted fuel supply throughout the complete heating season. In many localities, there is a limited gas supply, and in extreme cold weather, a standby fuel is required. The "Combi-Matic" will switch from gas to oil, either from a pre-determined setting of an outside thermostat or from failure of the gas supply.

Siemon Combi-Matic BURNER
COMBINES OIL WITH GAS

ECONOMICAL • DEPENDABLE • COMPLETELY *Automatic Heat*

Write for Literature

SIEMON and CO.

1819 HOLMES KANSAS CITY, MO.

IMPORTANT ANNOUNCEMENT!

To those who would like to DOUBLE air cooler sales in 1950

UTILITY APPLIANCE CORP.

FORMERLY UTILITY FAN CORP.

4851 South Alameda Street — Los Angeles 11, California

Dear Dealer:

Now, EVERYBODY is a cooler prospect for you. From the businessman to the small-home owner; the apartment renter, and even the folks who live in trailers!

Because the greatly expanded 1950 Utility line of evaporative air coolers will include models designed especially for trailers and small apartments (to retail for less than $30). And the small-home owner can get a duct-type blower for less than $70!

Yes, Utility will feature lower retail prices than ever before.

And, Utility will be America's most complete line, with MORE THAN 24 MODELS — from less than 800 CFM to over 12,000 CFM.

There will be a Utility Air Cooler to fit every need ... priced for every pocketbook.

It will be the only Air Cooler with the famous Utility Dynamically-Balanced Wheel ... the only Air Cooler whose CFM performance is pre-tested on the same equipment used by the Bureau of Standards. And, Utility's guaranteed air-delivery tables...plus consumer advertising will continue to build your business.

In other words, from one supplier — from Utility — you'll get a better cooler than ever before ... more models than ever before ... and lower prices than ever before.

That's why we know that you will DOUBLE your Cooler Sales and Profits, this year, if you ...

SEE UTILITY FIRST! PLAN YOUR 1950 SELLING CAMPAIGN AROUND AMERICA'S MOST COMPLETE LINE OF AIR COOLERS.

Cordially,

Ben B. Breslow

President

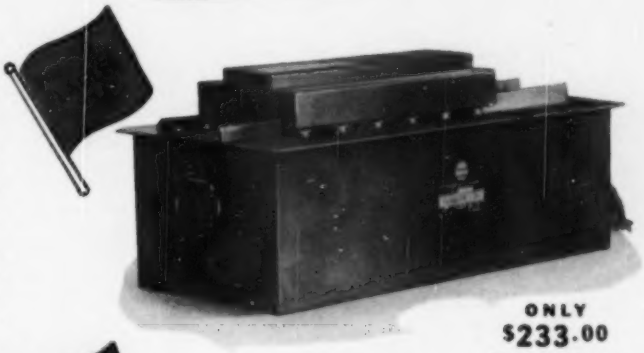
UTILITY

TRADE MARK

MANUFACTURERS OF FORCED AIR FURNACES, UNIT HEATERS, WALL HEATERS, GAFFERS & SATTLER AND OCCIDENTAL GAS RANGES

New Big Value in FLAGLER-LOCK-ROLLING MACHINES

Here, for the first time, is a lock rolling machine at a new low cost, that is versatile and produces smooth locks fast and at minimum cost. Ruggedly and sensibly constructed, Flaglers will give years of service with an all time low for repairs. Design based on years of experience. Forming rolls are available for both the Model 24 (for 24 gauge) and the "22" (for 22 gauge) to form Pittsburgh lock, Double Seam, Right Angle Flanges, and Drive Cleat. Installing rolls takes but a few minutes. Standard equipment includes grease gun and three years supply of lubricant, and four wrenches. Either model fits portable floor stand, available at slight additional cost. Model 24 has 1/3 h.p. A.C. ball-bearing motor. Model 22 has 1/2 h.p. A.C. ball-bearing motor.



ONLY
$233.00
(Stand $12.00 extra)

ONLY
$254.00
(Stand $12.00 extra)

FORMING ROLLS for MODELS 24 and 22:

(To Be Added to Price of Machine)

Pittsburgh Lock	$24.00
Double Seam	21.50
Drive Cleat	42.50
Right Angle Flange	20.00

(All Prices F.O.B. Detroit)

Check these 10 features that assure better locks at lower cost

- Double spindles on all Flagler machines.
- All rolls detachable.
- Latest type pyramid shaved gears in gear reduction train for added strength and quiet operation.
- All rolls powered—no idler rolls.
- Notch material any way or as much as you like—there's nothing to break or get caught in the notch. (PAT. APPLIED FOR.)
- Pittsburgh Lock is always open and uniform.
- Produces smooth drive cleats as short as 4". (Over 1,000 cleats per hour recently run on Model 22.)
- Torrington Needle Bearings throughout.
- All gears, shafts and rolls case hardened.
- Periodical check up by factory service man.

Qualified dealers everywhere

FLAGLER COST CUTTERS

ROY G. FLAGLER MFG. CO.

ROY G. FLAGLER MFG. CO., Detroit 34, Mich.

Send more information on Model 24 ☐
Model 22 ☐ Model 20 ☐
Have your dealer contact us ☐

Name .....
Title .....
Company .....
Address .....
City ..... State .....

ATTENTION!
manufacturers of

SPACE HEATING UNITS
AIR CONDITIONING EQUIPMENT
OIL BURNERS
STOKERS
GAS HEATING UNITS
HUMIDIFIERS

BUY THIS HARDWARE
all from 1 source

AND BENEFIT FROM... SIMPLIFIED CONTROL
COMPLETE SELECTION... UNIFORM HIGH QUALITY
LOWER SHIPPING COSTS... PROMPT DELIVERY
SIMPLIFIED PURCHASING

FLAT AND ROUND HEAD
STOVE BOLTS
ROUND AND BINDER HEAD
SHEET METAL SCREWS
also
CATCHES
HINGES
HANDLES

WRITE US FOR FULL INFORMATION

NATIONAL LOCK COMPANY
ROCKFORD • ILLINOIS

NEW LITERATURE

Use Coupon on Page 173

Heating-Air Conditioning Textbook 201

Heating, Ventilating, and Air Conditioning Fundamentals, by William H. Severns and Julian R. Fellows, is now available in a second edition. It has been carefully revised to include the results of research and investigation made in the field since its first printing in 1937.

It is intended primarily for engineers, architects, and heating contractors, but material is so clearly presented that it should prove helpful to students of architecture or mechanical engineering. Accepted commercial practices are given along with applicable theory, and examples of typical calculations have been included where they add clarity to the treatment.

Of special interest to contractors is the section containing nearly 200 pages devoted to material on warm air heating, panel heating, air purification, estimation of cooling loads, and air conditioning. Specific data and design methods are supplied for panel heating systems, and design procedure for summer and year around air conditioning systems is presented.

Tables in all sections are well arranged for easy reference; up-to-date illustrations form a valuable supplement to the text.

The authors, Mr. Severns and Mr. Fellows, are professors of mechanical engineering at the University of Illinois.

666 pages. Price $6.50.

John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y.

Fiberglas Characteristics 202

Attractive 36 page booklet, entitled Testing Methods and Facilities Used on Fiberglas Products, is a well organized presentation designed to provide customers with accurate data on the properties, uses, and performance characteristics of Fiberglas.

Testing procedures employed on thermal and acoustical materials, filter and mat products, reinforced plastic, textile, and electrical insulation products are described in separate sections. Two chapters are devoted to performance tests and testing for quality control.

Illustrations throughout show laboratory personnel operating testing facilities.

Owens-Corning Fiberglas Corp., Toledo 1, Ohio.

Furnace Manufacture 203

Interesting booklet illustrates and describes the manufacture of gas fired forced air furnaces in a modern plant from first shearing of metal to the final testing and shipment.

Following the furnace manufacturing story are illustrations and short descriptions of a line of basement and closet model furnaces that provide forced air central heating for large and small homes.

Henderson Furnace & Mfg. Co., Sebastopol, Calif.

THE HEAT'S ON!

Olson Supplies Immediate Heat Where and When You Need It

Whatever your need, large or small, a fully automatic Olson Heater will fill it.

Whatever the location, this unit operates efficiently with gas, oil, or coal.

Maintenance costs are low. Accessories are standard. All vital parts easy to get at.

Get the whole Olson story. Write for catalog BE-848 TODAY

Olson

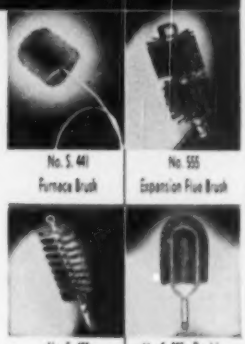
ARTHUR A. OLSON & COMPANY
BROAD ST., CANFIELD, OHIO

"SCHAEFER BRUSHES SOLVED OUR PIPE CLEANING PROBLEMS AND

CUT CLEANING COSTS OVER 40%"

Writes Mr. E. A. Knab
Pres. of The Knab Co., Plumbing and Heating Contractors
Milwaukee, Wis.

Schaefer Brushes are designed to clean the toughest jobs under the worst conditions quickly and efficiently. The money you save in time by insisting on Schaefer Brushes will more than pay for the cost of the brush. Schaefer Brushes are made from the finest materials under strict supervision. Every brush carries our seal — look for it!



No. S. 441 Furnace Brush
No. 555 Expansion Flue Brush
No. S. 432 Boiler Flue Brush
No. S. 393—Double Stem Boiler Brush

SEND US YOUR CLEANING PROBLEM

Everyone has, from time to time, a particular job of cleaning for which no brush is suitable. When these problems arise send it to Schaefer to be solved.

Send for latest catalog No. 449

SCHAEFER BRUSH MFG. CO.

SCHAEFER BRUSH MFG. CO.
117 W. Weber St., Milwaukee 4, Wis.
Please send more information about your service for solving special cleaning problems.
Name_____ Title_____
Company Name_____
Address_____
City_____ State_____

117 W. Walker St. *"Always Buy Schaefer — It's Safer"* **Milwaukee 4, Wis.**

NEW LITERATURE

Use Coupon on Page 173

Machinery Reference Volume 204

Machinery's Handbook, now in its 14th edition, contains basic information, data, and formulas for designing and building any type of machine or other mechanical device and is designed for universal reference use.

The 1949 edition includes revised sections on broach design, worm gearing, and roller chain. One outstanding feature which it contains is the Unified and American Standard Screw Thread System, which provides interchangeable screw threads in the United States, Canada, and Great Britain. The new classes of screw threads occupy 24 pages and represent an important development in the new standard.

Another useful section deals with the commonly used types of ac and dc motors and their operating characteristics. A two page chart supplies motor characteristics and typical applications.

Standard compositions of 156 carbon and alloy steels are given as revised by American Iron and Steel Institute. There is also practical information on typical applications of various steels.

1911 pages, 4½ by 7 in. Price $7.00.

The Industrial Press, 148 Lafayette St., New York 13, N. Y.

Air Diffusion Panels 205

Six page bulletin, No. 395, explains the use of the Multi-Vent panel for low velocity air diffusion in large offices, stores, restaurants, auditoriums, and small private offices. It portrays by photographs how these panels, completely concealed behind metal acoustical ceiling, handle both supply and return air eliminating all visible outlets in the air conditioned space. Photographs of private offices show how perforated acoustical ceiling can be combined with plaster light coves for unusually attractive interior design.

The Pyle-National Co., Multi-Vent Div., Chicago 51, Ill.

Heat Loss Data Bulletin 206

Heat loss data bulletin for direct fired industrial heating provides data tables for computing heat loss and figuring heat requirement that are useful to heating engineers who must figure heat loads and fuel consumption. Tables cover outdoor design temperatures, common types of industrial construction, heat losses through window and door infiltration, and heating constants.

Also included are complete catalog descriptions of Thermobloc industrial heating units of 300,000 and 550,000 Btuh output capacity. Supplementary data sheet series showing how industrial heaters can be used for tempering make-up air, process heating, and other special applications is also available.

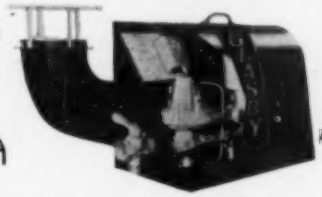
Thermobloc Div., Prat-Daniel Corp., East Port Chester, Conn.

GLASBY

GAS Conversion Burners

Factory Assembled and Tested
Saves Installation Time
Push Button Pilot Lighter and
Safety Switch

Listed



Utility Approved

A Quality Burner at Competitive Price

Let a Glasby Sell for You!

Dealers write for information

J. P. GLASBY MFG. CO., INC.
Belleville 9, N. J.

GLASBY

UP-SIDE-DOWN FURNACE

for Basementless Homes

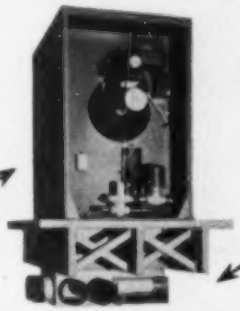
Bungalows

Garden Apts.

APPROVED
GAS

F.H.A.
APPROVED
OIL

Furnace Above Floor



Plenum Below Floor

Designed for Warm Air Radiant Convection Heating Systems

Dealers write for information

J. P. Glasby Mfg. Co., Inc.
Belleville 9, N. J.

Elgo Ventilating Specialties

FAMOUS AUTOMATIC SHUTTER

Unusually sensitive to air currents, causing the louvers to open instantly when the fan is turned on—and snap shut when the fan is turned off.

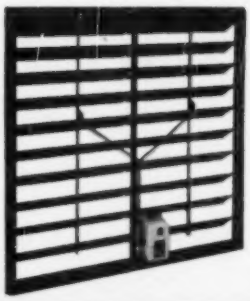
The aluminum louvers are weather-stripped on inner edge, instead of on outer edge, making the unit the tightest closing shutter on the market.

Louver blades equipped with special felt silencing pads. Swivel joint with shoulder rivet.

Sizes from 8" to 72" square—also rectangular.

"ELGO" TYPE
AUTOMATIC SHUTTER
Front View (Closed)

Elgo Shutters Are Distributed Through Fan and Air Conditioning Equipment Manufacturers



All-Steel Motorized Shutter

•

Used for exhaust ventilation in industrial, commercial and residential buildings. Automatically controlled by fan switch. Six-second opening. Positive closing. Storm-proof. All-steel construction.

Elgo Shutter & Manufacturing Co.
2738 W. WARREN — DETROIT 8, MICH.

Elgo Shutter & Mfg. Co.
2738 W. Warren
Detroit 8, Michigan

Free CATALOG

Please send catalog showing the items checked below:

Automatic Shutters
Stationary Shutters
Hand Operated Shutters
Ceiling Dampers
Balanced Vent Units
Motorized Shutters

Name .....

Address .....

City ..... State .....

THIS NAME MEANS QUALITY IN A GAS BURNER

BARBER

Gas Burners

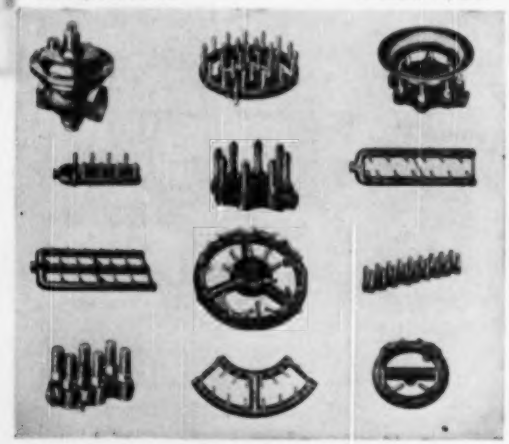
For over 30 years the name Barber has stood for the very finest in gas burners. Barber automatic Conversion Burners, in round or oblong types for all furnaces and boilers, are TOPS for efficiency and economical operation. Famous Barber air-activated jets (available in no other burner) assure the most intense heat, applied directly to walls of fire-box.

Barber Appliance Burners, in scores of designs, have for years been standard equipment in hundreds of appliances built by outstanding manufacturers. Barber is well equipped to design, test, and supply such units, and always accurately adapts the burner (which is the heart of the appliance) to the individual purpose and the type of gas to be used. For maximum performance and dependability, see that genuine Barber Burners are used in the gas appliances you recommend or sell.

Write for latest Catalog showing all models of Burners for Appliances, also Conversion Burners, Regulators and Controls.

THE BARBER GAS BURNER CO.

3704 Superior Avenue Cleveland 14, Ohio



NEW LITERATURE

Use Coupon on Page 173

Mechanical Ventilation 207

Illustrated brochure on a method of mechanical ventilation of industrial structures is offered as Bulletin 520. When used in conjunction with venting equipment, Counterflo heaters are described as performing a triple function of drawing in air from the outside, heating to desired output temperature, and distributing it uniformly without drafts through the working area. The same equipment can be used during the summer for drawing in and distributing fresh air.

Method of tempering air with industrial heaters is fully explained and the units are illustrated in existing installations.

Dravo Corporation, Dravo Bldg., Pittsburgh 22, Pa.

Aluminum Alloy Guide 208

Offered as a handy reference guide, a folder entitled Properties of Revere Aluminum Alloys contains a condensed chart on the properties of most of the aluminum alloys available in the form of wrought products.

Tables show tensile strength, yield strength, elongation, shear strength, endurance limit, hardness, density, melting range, modulus of elasticity, electrical conductivity, as well as many other properties.

Revere Copper and Brass, Inc., New York 17, N. Y.

Blowers and Exhausters 209

Bulletin No. 3014-D contains information on Types E and RE electric blowers and exhausters. Units are illustrated and capacity tables are given for each model. Diagrams of blower and exhauster installations are supplied on the back cover.

Buffalo Forge Co., Buffalo 5, N. Y.

Heating Engineering Booklet 210

Booklet containing engineering data and tables on conversion burners and space heating equipment is offered as a ready reference volume for heating contractors and dealers.

Budco, Inc., 13415 Gratiot Ave., Detroit 5, Mich.

Thermal Insulation Booklet 211

Information on heat transfer, vapor and vapor flow, condensation radiant heating, and other information pertinent to the subject of insulation are subjects covered in a new edition of Simplified Physics of Thermal Insulation, a 44 page booklet.

In addition to the findings and interpretation of the author, Arthur Schwartz, there are extracts from reports of authorities in the field. Various kinds of insulation are discussed together with recommendations for their use.

It is well illustrated with charts, diagrams, and photographs. A complete list of sources is appended.

Infra Insulation, Inc., New York 7, N. Y.

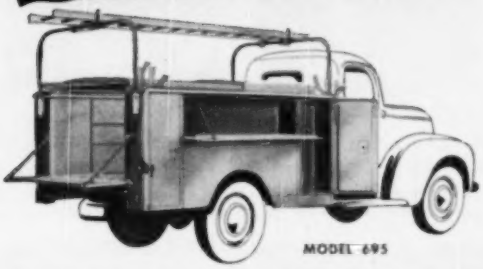
IT'S ABOUT TIME!

YES — It's about time that someone designed a Service Body to cover the needs of the Furnace and Sheet Metal Man — Morrison has done it with the

Carry-All

See the "Carry-All" Exhibit in Space 9 at the CHICAGO AUTOMOBILE SHOW February 18-26 International Amphitheatre

HERE 'TIS— A SERVICE BODY THAT WILL CARRY YOUR FURNACES AND SHEET METAL — WITH RACKS FOR LADDERS AND DOWN SPOUTING — WITH LOCK COMPARTMENTS FOR TOOLS, FURNACE SERVICE PARTS AND CONTROLS.



MODEL 695

The Morrison Utility Body is designed to fit any known chassis—and because of its rugged construction, it can be expected to outlive the original chassis.

All compartment doors are constructed of an inner and outer steel stamping securely welded together into a rigid unit and assembled into the body to insure a weatherproof closure.

Wise locks protect the contents of the side boxes—relocking without the use of key, automatically ejecting key in locked position; reversible keys and concentric tube mechanism withstand severe weather conditions and abuse.

The all-industry Morrison "CARRY-ALL" is carried in stock for immediate delivery to franchised chassis dealers by more than 50 established truck equipment distributors strategically located from coast to coast.

CARRIE ALL

- Rugged all-steel construction.
- Fits any standard commercial ½, ¾ or 1 ton truck chassis.
- 48½" inside width—greater floor space.
- Underbody bridge-type construction.
- Lightweight — High Tensile Steel — 25% weight saving plus greater structural strength than ordinary steel — carries heavier loads.
- Offset-reinforced non-skid heavy-load floors.
- Reinforced stamped man-carrying top (optional).
- Weatherproof compartments.
- Extra roomy convenient side boxes for tools, parts, accessories.
- Bassick center control of single closure, dual-latch, panoled doors.
- Wise key-operated locks and handles.
- Interchangeable parts.
- Completely precision designed, engineered, tooled, die-stamped and assembled.
- Streamlined all-purpose bodies—for every type of sales and service.

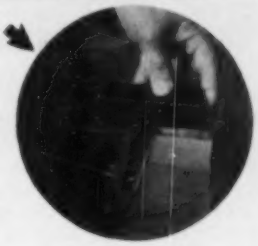
MORRISON STEEL PRODUCTS, INC.

MORRISON

"Carry-All" Service Body Division

625 AMHERST STREET, BUFFALO 7, N. Y.

FOCUS YOUR ATTENTION ON CLEAT EDGES



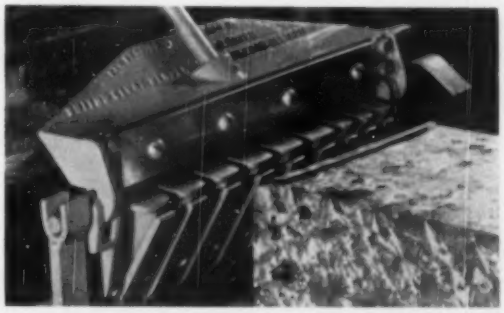
Because forming CLEAT EDGES consume as much as *two-thirds* of the *forming time* on a length of square pipe, when out-dated methods are used.

Forming CLEAT EDGES with hammer and dolly, snap-on pliers, tongs or a slotted piece of metal is an expensive operation . . . as expensive as it would be to use these makeshift tools to make the drive-cleats.

NOW YOU CAN HAVE DRIVE-CLEATING DONE AT ITS BEST!

You can have *Cleat Edges* and *drive-cleats*, that are straight, uniform and identical, no matter who the operator . . . Both done with the only bender that can do both . . . Each exactly fitting the other without the aid of a screwdriver . . . It's no wonder that some users have reported saving the price of a SMITH'S CLEAT BENDER on the first job.

More than 3500 users of these benders have found that they are NOT GADGETS, but are as essential as their *right arm*. . . . They *save more time* than any other tool used on square duct work . . . and are *Usable more often*.



√ **Bends uniform cleat edges in less than 5 seconds!** *Other methods take as much as a minute or more.*

√ **Makes perfect drive cleats in less than 8 seconds!** *Free of ripples and ready to use without the aid of a screwdriver.*

No money tied up in idle equipment . . . And no time wasting adjustments to make, fits any size duct up to width of bender and any thickness up to 20 Gauge.

No. 12 SMITH'S CLEAT BENDER (12" wide) . . . $42.00*
No. 18 SMITH'S CLEAT BENDER (18" wide) . . . $66.00*
*(Prices subject to change without notice).
FOB WAUKEGAN, ILLINOIS

For the last word on the performance of these benders see any authorized jobber or tool supplier.

R. E. SMITH

1513 Monroe St. Waukegan, Ill.

INDUSTRY ITEMS

FAIRBANKS, MORSE & Co., manufacturers, announce the appointment of A. C. Traub as manager of their Stoker Division with headquarters in Chicago. He succeeds F. J. Kluempers who has been transferred to the General Dealer Sales Division.

Mr. Traub joined the Fairbanks-Morse organization in 1937 as sales promotion manager of the company's Cincinnati Branch. Later, in 1941, he became manager of the Dealer Department of the same branch. In 1947 he was transferred to Los Angeles where he was manager of dealer sales, which position he left to take his present assignment in the Stoker Division.

A. C. Traub

W. C. Barrett

W. C. BARRETT has been appointed district sales representative for the Williams Oil-O-Matic Division of the Eureka Williams Corporation according to an announcement by E. H. Davison, general sales manager for the division.

In his new position, Mr. Barrett will handle Oil-O-Matic heating equipment sales in Connecticut and part of Massachusetts. He was formerly associated with the George M. Clemons Plumbing and Heating Co., Janesville, Wisconsin as sales manager.

THE HERMAN NELSON CORPORATION, Moline, Illinois, manufacturers of heating and ventilating products, recently announced the following appointments to its sales staff:

W. N. Murray has been appointed New York regional sales manager supervising sales activities covering Herman Nelson heating and ventilating products including portable heaters and ventilators in the Boston,

W. N. Murray

R. K. Roulston

New York, Syracuse, Buffalo and Philadelphia territories. He will maintain headquarters in Boston.

Mr. Murray, a graduate of M.I.T., joined the Herman

Dealers Say!—"DUAL-X" GETS THE OIL FURNACE ORDER FOR US

80,000 BTU
"R" Series Hi Boy

80,000 BTU
Lo Boy

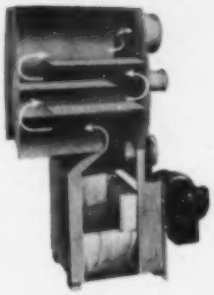
Sturdy "R" Series
Heat Generator

STURDY "R" SERIES FOR THE PRICE BUYER

- High Quality Pressure Burner
- Precast Combustion Chamber
- Beautifully Finished Cabinet

72,000 BTU
Gravity Model

THE TRULY DIFFERENT "M" SERIES FOR THE QUALITY BUYER



"M" Series
Heat Generator

Cutaway showing extremely long flue gas travel—16 ft. on #110M—Constantly upward—No down draft to cause soot accumulation.

Table Top Demonstrator of this Furnace Body Now Available

110,000 - 160,000
210,000 BTU.

Down flow models now available for radiant floor heating
70,000 and 100,000 BTU

DUAL-X FURNACE MFG. CO.
6560 S. Wentworth Ave.
Chicago 21, Illinois
FACTORY—MICHIGAN CITY, INDIANA

RUBBER *Insulated* Ball Bearing Equipped

EDR rubber insulated pillow blocks are especially designed for ventilating and air conditioning fans, furnace blowers and other installations where quietness is of first importance, and freedom from lubricating problems is a must.

The EDR's remarkable quietness stems from its precision ground ball bearing which is cushioned in synthetic rubber. It is electrically grounded and designed to compensate for normal misalignment during installation and operation.

The housing is a rigid, sturdy one piece casting, service-proven for over ten years. Ample lubricant capacity assures years of carefree service. Lubricant seals are of the labyrinth type—free running—non-wearing.

Write for **EDR BULLETIN** *for complete details and dimensions*

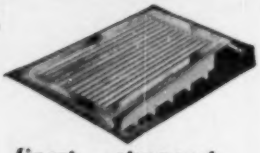
AHLBERG BEARING COMPANY
Manufacturers of CJB Master Ball Bearings
3013 WEST 47TH STREET, CHICAGO, ILLINOIS

PILLOW BLOCKS

QUICK DELIVERY
STANDFORATED
QUALITY PRODUCTS
FOR HEATING and AIR CONDITIONING...

FLOOR REGISTERS

one-piece frame construction



beveled edges
fabricated metal
more free air space
solid construction
no loose parts
ultra-strong oak finish, baked on for longer wear—matches flooring.

MADE IN ALL STANDARD SIZES

finest - strongest

COLD AIR FACES

No. 41-H "Bend-Ezy" SIDEWALL REGISTER

Sturdy construction; stamped from sheet metal. Incorporates horizontal bendable bars which are set at factory for 30 degrees downward deflection. At time of installation each bar can be easily adjusted with a "bend-ezy" tool to any desired angle for upward, downward or straight flow.

Has single damper; 3/16" turned down edge for flush installation.

Pleasingly Styled and Efficiently Designed.

FOR EVERY INDUSTRIAL USE

PERFORATED METALS

GRILLES GUARDS
SCREENS FILTERS

We also manufacture the MIRRO-CLO Line of Bathroom Medicine Cabinets

Write for Complete Information and Price List

STANDARD STAMPING & PERFORATING CO.
3151 W. 49th PLACE - CHICAGO, ILLINOIS

Nelson Corporation in 1928 as representative in the Boston sales territory. During the war he attained the rank of Lieutenant Commander in the Navy.

Robert K. Roulston, also an M.I.T. graduate, is the new manager of the Boston branch office. He has had many years' experience in the heating and ventilating industry, having been associated with the B. F. Sturtevant Company prior to the war. He first served in the Corps of Engineers and later became Lieutenant Colonel in the Air Corps.

Associated with Mr. Roulston in the Boston office will be Richard M. Burbank as well as Philip A. Boulton who maintains the Springfield, Massachusetts, office.

A. F. Zissler has been elected executive vice president and general manager of The Peerless Electric Company, Warren, Ohio, according to an announcement recently made by Ralph Kroehle, president of Peerless. A graduate of the engineering college of Iowa State University, Mr. Zissler has had extensive experience in the electrical industry. He has represented the Peerless Electric Company, manufacturers of motors, fans and blowers, in the Rochester, New York territory for the last eleven years but will now make his headquarters in Warren, Ohio.

A. F. Zissler

John Huber

The Perfex Corporation, manufacturer of automatic temperature controls, has announced that John Huber has joined the home office sales department of their Controls Division.

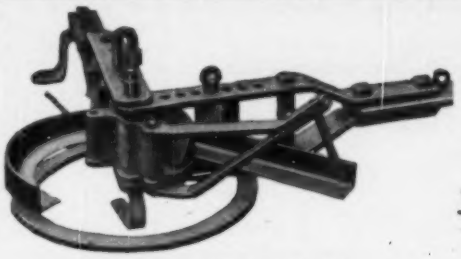
Mr. Huber, a Pennsylvanian by birth, entered the heating field in 1926, working for the Heil Company in Milwaukee as an oil burner installation and serviceman. In 1929 he returned to Pennsylvania and organized Heil Automatic Heating of Lancaster which he operated for 20 years, with time out for two year's Army service in 1944 and 1945.

Announcement is made by Toridheet Division, Cleveland Steel Products Corporation of the appointment of the Famous Furnace Company as exclusive distributor of Toridheet heating equipment in 27 counties in the northeastern section of Ohio. The area they will serve are all counties east of and including Erie, Huron, Richland, Marion, Delaware and Jefferson.

Famous will feature the complete line of Toridheet heating units and oil and gas conversion burners and water heaters. The company is located at 6420 Woodland Avenue, Cleveland 4, Ohio.

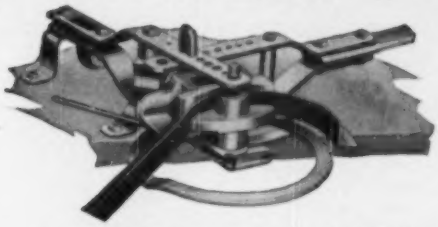
The Cleveland firm has appointed the Famous Furnace Company of Lorain, Ohio as their sales representative for the area 100 miles west and south of Lorain.

The Lorain company recently announced the open-



Radius bending angle iron (inside or outside) accurately and without twist. Master die and forming blocks only extra equipment required.

Solve Your Bending Problems . . . at LOW COST!



HOSSFELD Universal Bender

(Wrenchless Type)

Make smooth, even bends without flattening or splitting pipe or conduit up to 2" I.D. Bends to any degree, continuous coil, offsets and irregular shapes. Radii from 2" on ¼" pipe to 10" on 2" pipe.

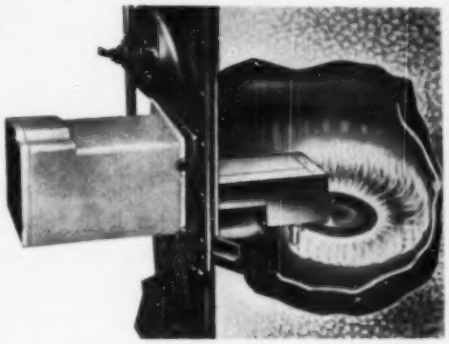
Also bends flat, square and round stock with standard equipment.

For complete details write to:

HOSSFELD MFG. COMPANY
WINONA, MINNESOTA

Samples of Bar Bending

Samples of Pipe Bending



SALES GO UP

with the *Handley-Brown*

FUEL DOOR BURNER

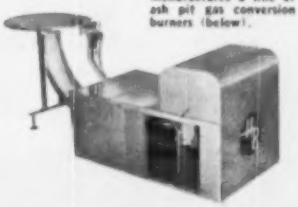
. . . for gas conversion

YES, sales do go up and profits, too, with the Handley-Brown line. The H-B FUEL DOOR conversion burner is an easy seller, quickly installed, easily serviced. Customers like it, buy it, because it fits into the fuel door of any heating plant. It even fits over stokers and oil burners with no change to the heating plant. They like it most because its scientific and rugged construction means top performance, lifetime service.

EASILY INSTALLED

Fits into fuel door, quickly, easily. No grates removed, no brick inserts, no changes to firebox. Fits furnaces, boilers. Short line—one burner for all size homes. Wide input range . . . up to 200,000 BTU's. Maximum efficiency at all inputs. The H-B Fuel Door Burner is exclusive, patented design. Ruggedly built. AGA listed. Lowest installation cost of any burner on market. Simple fuel door installation. Not affected by flooded basements. Completely automatic. Easily serviced. Portable . . . can be sold to renters. Shipped completely assembled. Write for full details today.

Handley-Brown also manufactures a line of ash pit gas conversion burners (below).

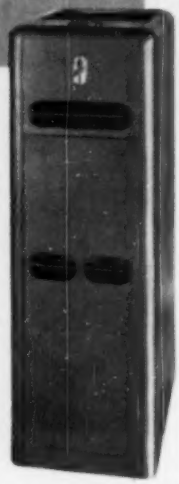


Handley-Brown Heater Co.
Jackson, Michigan

Water Heaters. . . .H-B. . . .Gas Conversion Burners

SEQUOIA

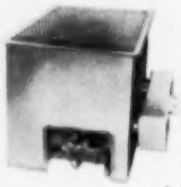
SOLD . . . SERVES with SATISFACTION



SEQUOIA is both a brand name and a symbol of satisfaction—satisfactory service for builders and home owners, satisfactory sales for dealers. To participate in the profits available from this growing line of models designed to meet almost every heating requirement, ask your jobber or write directly to the factory.

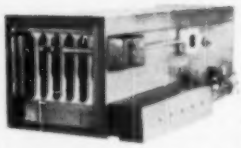
FORCED AIR, SERIES "UM". An extra-slim model available in a full range of sizes from 70,000 to 175,000 BTU input. Handsome cabinet makes it an ideal installation for basement, kitchen or utility room. (From width 20", depth 30", height 60".)

DUAL WALL HEATER, SERIES "DWH". Sequoia's popular 40,000 BTU "Streamliner" unit. Delivers heat from both sides of wall. Fits in regular 2x4 stud wall, saving valuable floor space. Especially designed for homes with slab floors or second-story rooms.



NEW FLOOR FURNACE, SERIES "F" & "D". A versatile unit in five models ranging from 22,500 to 75,000 BTU input. Requires no pit or special construction. (From depths of 25¾".)

HORIZONTAL FORCED AIR, SERIES "H". Another brand-new model in the Sequoia line for use where installation space is at a premium. 80,000 BTU model available now; larger models planned for early 1950 production. (Width 16½", height 16½", length 50".)



SEQUOIA MANUFACTURING COMPANY

1000 BRITTAN AVENUE • SAN CARLOS, CALIFORNIA

$$$$$$$$$$$$$$$$$$$$$

To Contractors Who

WANT TO MAKE MONEY ON EVERY CONTRACT

Here is an easy-to-use "Blue Print for Profit" bookkeeping system especially designed for sheet metal-warm air heating contractors

- **Simple, positive, easy to use.**
- **Exactly records Cash Paid Out, Cash Received, Pay Roll and Job Records, Tax Data.**
- **Insures recovery from *every* job your cost of doing business and your business Overhead.**
- **Helps you to keep within your estimates by producing actual against estimated costs—job by job.**

THE SYSTEM WITH COMPLETE INSTRUCTIONS

CONSISTS OF—

50 Cash paid out sheets
50 Payroll sheets
25 Cash Receipts sheets
1 Binder
1 Income Tax Guide
1 Set Celluloid Tabbed Index Dividers
100 Job Record sheets (25 short forms for 100 jobs) (75 long forms for 75 jobs)
1 Income Tax Calendar

The System Is Sold Satisfaction Guaranteed Or Your Money Back

ORDER FORM

Sheet Metal Contractors National Association
170 Division St., Elgin, Ill.

( ) Send one complete Bookkeeping System—Price $35.00

( ) Check or money order attached

( ) Send illustrated Folder describing the System

Firm.....

By..... Title.....

Street.....

City..... Zone.... State.....

ing of new offices and warehouse at 125 East 20th Street where they will carry a complete line of heating, sheet metal and roofing supplies.

The Lorain operation will be under the direction of Thornton S. House, formerly sales manager of Niagara Furnace Division of Forest City Foundries Co., assisted by Myron Kaplansky, who has been their resident representative in the area.

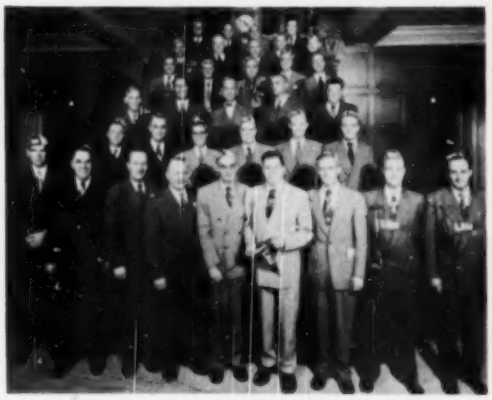
Frank E. Mehrings retired from his position as vice president of the Meyer Furnace Company, Peoria, Illinois on December 1st. Mr. Mehrings had been with the company for 30 years, entering its employ in September, 1919, after serving in the Navy in World War I.

He started as a stenographer-clerk and over the years advanced through many positions until he was appointed vice president in charge of sales in 1941. His term of office has seen a considerable expansion of the sales market of the Meyer company and his abilities have aided this expansion.

One of the most prominent figures in the heating industry, Mr. Mehrings served two terms as president of the National Warm Air Heating and Air Conditioning Association.

His future business plans are somewhat indefinite but after a few months vacation he will decide what phase of the industry he wishes to continue in.

During the annual Sales Conference of the Lau Blower Company, Dayton, Ohio, held October 26, 27, and 28, over 35 Lau representatives and their salesmen were initiated into "Betta-Sella-Fan" fraternity.



The Lau fraternity

The theme of the intensive three-day conference carried youngsters and oldsters alike back to their college days complete with Frosh beanies and pennants. All the attending students graduated with high honors and were presented with diplomas at the end of the meeting.

E. B. Lau, president, expressed great satisfaction with the growing field sales force, and stressed the fact that new, greatly improved products and comprehensive selling plan would lend them even greater assistance in the year ahead.

Walter B. Lloyd Company, of Salt Lake City, has been appointed a distributor of Stewart-Warner South Wind and Saf-Aire gas-burning heaters, H. W. Milner,

This Year, Sell...

COOLING SATISFACTION

EVAPORATIVE AIR COOLING

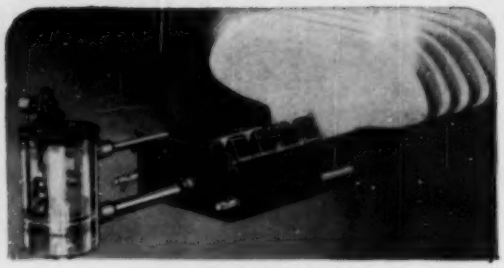
Designed Especially for

AIR CONDITIONING CONTRACTORS

The newest, finest achievement of International's years of evaporative cooling experience is now available to selected air conditioning contractors. The new Imperial enables you to offer a precision made, HOT-DIPPED GALVANIZED unit with greater pad area and exclusive features that will assure your customers lasting cooling satisfaction.

Manufactured in eight sizes in air delivery capacities from 4200 to 14400 CFM, the Imperial is available in horizontal and down discharge models in all sizes.

Write today for complete information and literature about the new Imperial evaporative air cooler.



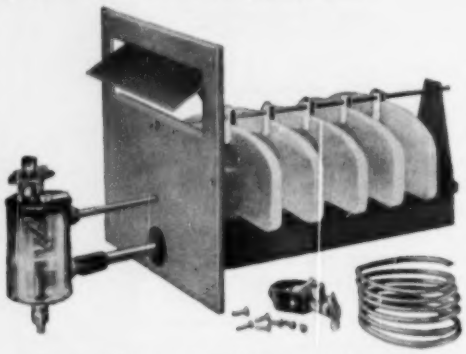
MONMOUTH FLOTROL

The Finest HUMIDIFIERS *You Can Buy*

See the New "310" Series!

● The "310" (illustrated below) is designed especially for modern *smaller* furnaces and air conditioning units, up to 100,000 BTU capacity. Monmouth ceramic diffusion plates (new style). Heavy copper pan. Shipped completely assembled—a 1-package product, nothing to put together, nothing else to buy. Quickly installed from outside the furnace. All you need to do is cut your hole, make water connections, attach access plate (containing combination inspection door and plenum register) to plenum and level the pan with adjusting screw from the front. Register has pivot shut-off valve and equals an 8" x 4" register in free area. The whole front access plate is hinged to pan and fits vertical or slanting plenum.

● Although *lower priced* than previous Monmouth Humidifiers, this "310 Series" model operates on the long famous and time-tested Monmouth principles, has the same control unit, and is in every respect a true Monmouth quality product — just a smaller edition, that's all.



Why not send for a sample "310" Monmouth Flotrol NOW—and see for yourself that it "clicks" perfectly on small furnace installations? The *price* will interest you. Full details on request.

THE CLEVELAND HUMIDIFIER CO.

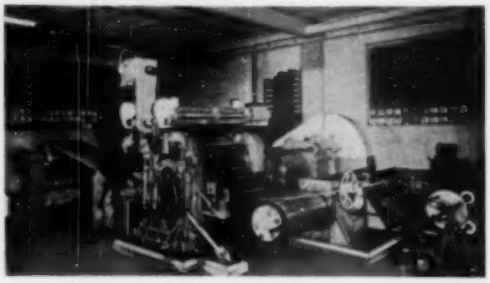
7802 Wade Park Avenue — Cleveland 3, Ohio

MONMOUTH HUMIDIFIERS

sales manager for domestic heating equipment of the South Wind Division of Stewart-Warner Corporation, Indianapolis, Ind., has announced.

The Lloyd Company, formerly located at 850 South Main Street, Salt Lake City, has moved to larger quarters at 51 South Second, West, Walter B. Lloyd, president, has announced. His firm also distributes York, Norge and other lines in Utah, western Wyoming, eastern Idaho and eastern Nevada. V. A. Smith is vice president and D. F. Woods is manager of the heating department.

Char-Gale Manufacturing Company of Minneapolis and Omaha has recently announced an addition to their aluminum production facilities that will be of interest to the heating and sheet metal field.



New reduction mill

In their Minneapolis plant No. 1, Char-Gale has installed a large capacity reduction rolling mill. This huge machine has already improved and speeded up production on aluminum sheets and coils.

The installation of this new mill is in keeping with Char-Gale's strict policy to give consistently faster and better service to their customers in every way possible.

Hugo Wurdack, president of the Automatic Firing Corporation, has announced his company's acquisition of the Gemco Air Conditioning Division of General Engineering and Manufacturing Company, St. Louis. At the same time Mr. Wurdack stated that the extensive plant and facilities of the latter company had been purchased by the Rafco Realty Company and that Automatic Firing Corporation would occupy a major part of it under lease.

The Automatic Firing Corporation is 18 years old and makes automatic firing equipment for gas, oil and coal.

Gemco heretofore marketed 3, 5 and 7½ ton air conditioning units for stores and offices throughout the country. With the acquisition of this division, Automatic Firing Corporation becomes one of the few companies which provides both automatic heating and air conditioning equipment.

The company, now located at 6504 Olive Street Blvd., St. Louis, intends to occupy its new home shortly after the first of the year. Facilities include 110,000 sq ft of buildings under roof and 8 acres of land.

Officers of the Automatic Firing Corporation are Hugo Wurdack, president; Sidney Strauss and James Lee, vice-presidents; Evelyn S. Wurdack, secretary and treasurer.

The New Year is Going to be a Big Nu-Way Year!

Why You Can Expect Even Bigger **Nu-Way** Sales in 1950!

1

WHAT DOES NU-WAY OFFER?

Nu-Way Oil Burners — a superior product backed by a smash advertising campaign to reach a mass market.

2

WHO ARE NU-WAY PROSPECTS?

Homeowners searching for economy, convenience, comfort and cleanliness — all strongpoints of Nu-way Oil Burners.

3

WHAT ABOUT NATIONAL ADVERTISING?

Ads like the one at the right will stress Nu-Way sales features and point to problems common to every household.

4

WHERE WILL THESE ADS APPEAR?

In the Big Four, Nu-Way ads will be seen regularly by 6,866,751 homeowners who want the best for their homes.

5 YOU! . .

HOW CAN YOU PROFIT FROM THIS ADVERTISING?

In every Nu-Way ad the reader is urged to see his *local heating contractor*. Capitalize on Nu-Way's advertising . . . Nu-Way's acceptance!

6 **ADDITIONAL NU-WAY SALES PUNCH!**

Catalog, folders, bulletins and newspaper mats will round out Nu-Way's 1950 ad campaign . . . a business-building sales program second to none!

7 **WATCH FOR NEW NU-WAY IMPROVEMENTS**

Nu-Way — originator of Patented Air Control and Patented Nozzle Shield — expects to launch new, sales-getting improvements in 1950

WRITE TODAY! For new folder containing complete details on the Nu-Way line of Oil Burners.

THE **Nu-Way** CORPORATION
ROCK ISLAND, ILLINOIS

Sold Through Jobbers and Distributors Also Special Applications for Furnace and Boiler Manufacturers

"AUTOMATIC OIL HEAT EXCLUSIVELY SINCE 1921"

Speed installation with Kno-Draft

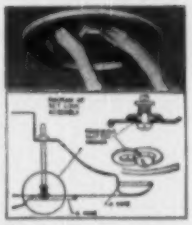
the completely adjustable air diffusers

Helps get job OK's faster, too!

Kno-Draft's adjustment features not only help you get off the job faster—with a well satisfied OK—but they eliminate the tough job of figuring everything about the air movement in advance. If people or partitions are relocated while the job is in progress, you can adjust to the changes in a jiffy. A screwdriver adjusts the three suspension bolts for any angle of air discharge from horizontal to vertical (Fig. 3). Balancing is fast and easy. The single annular air stream permits immediate and accurate velometer reading (Fig. 4). A twist of the wrist regulates the air volume instantly (Fig. 5).

Kno-Draft self-contained inner unit (Fig. 1) and the Type HD set lock assembly (Fig. 2) cut installation time in half, according to contractors who have used them for the first time. They're especially handy where ceilings already exist. Then it's a simple job to remove the inner assembly, attach the outer cone to collar or duct and reassemble the diffuser. The outer cone slips over the suspension bolts and is secured by a slotted washer which keeps the spring-loaded catch in compression (Fig. 2).

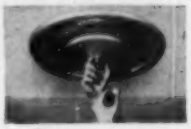
(Fig. 1) Self contained inner unit



(Fig. 2) Type HD set-lock assembly

(Fig. 3) Air Direction Adjustment

(Fig. 4) Balancing



(Fig. 5) Air Volume Adjustment

Send for FREE handbook on air diffusion. It contains up-to-date engineering data, charts, photographs, sketches and dimension prints that simplify the selection and application of Kno-Draft Diffusers. It shows how you can get top efficiency from an air conditioning system, cut installation time and get off the job faster. Please write Department J-5.

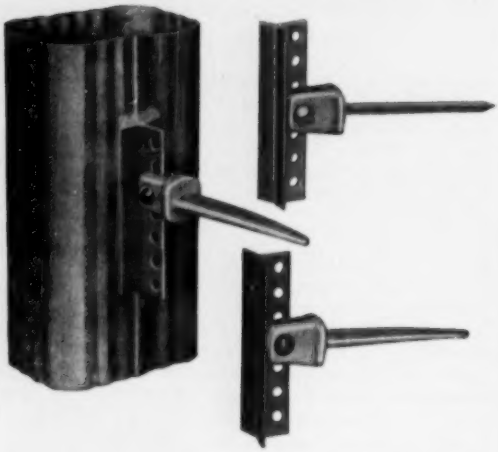
W. B. CONNOR ENGINEERING CORP.

Air Diffusion • Air Purification • Air Recovery

112 East 32nd Street CONNOR **New York 16, N.Y.**

IN CANADA: Douglas Engineering Co., Ltd., 190 Murray Street, Montreal 3, P.Q.

For a Neat, Substantial Job Use F & F Conductor Fasteners



Here is really the best conductor fastener you have ever used. Cadmium plated malleable iron drive (flat shape for bricks, round for wood) bolts to galvanized or copper perforated clip, adjustable for height. Clip is soldered to back of conductor. The F & F takes less time to put in, makes a more secure and permanent installation.

Since the clip is made of the same material as the conductor, it is very easy to solder. With this device you get a nicer appearing job—the fastener is entirely concealed. The pipe stands ½" away from the wall, a worthwhile feature. Conductor replacement on any job originally done with F & F is always easier. There is simply no comparison between the old-style makeshift "strap" and the F & F method. Any contractor who takes pride in his work will prefer to use this high grade, inexpensive fastener on all his jobs. For details and list prices write your jobber or us.

Made by

FRANCK AND FRIC

7109 Kinsman Road **Cleveland 4, Ohio**

ALL MATTERS PERTAINING to Ko-Z-Aire furnaces have been turned over to the manufacturing plant at Red Oak, Iowa, it was announced recently by Jones & Brown, Inc., national distributors of the product.

This change-over became effective as of January 1, 1950 and was necessary in order to more efficiently handle the volume of business that has developed in Ko-Z-Aire furnaces over the past year. Jack Hildebidle, general manager of the plant at Red Oak, Iowa, will handle all sales, production and administration departments, under the guidance of the Jones & Brown organization.

"BACK TO DAVENPORT SELLING" was the theme of a recent week-long intensive sales training conference sponsored by the automatic heating division of the

General Electric Company, Bloomfield, N. J., for all of its field heating representatives. Purpose of the conference was to introduce 1950 sales plans and to train the representatives in conducting effective sales training conferences with distributor salesmen and dealers.

The first two days of the meeting were devoted to the product story, including design, application and servicing of oil and gas fired boilers and furnaces, and to a review of administrative functions and market studies.

Emphasizing the importance of training salesmen in the effective use of the many sales tools provided for the 1950 campaign, the remainder of the conference, conducted by the advertising, sales promotion and sales training division, was devoted to training the representatives in the methods and techniques of holding effective distributor sales training meetings.

RCS Tool Sales Corp., national sales agents for Super-Saw, has moved to new offices in the Chalstrom building, Joliet, Illinois. The new offices occupy the entire block on the west side of the building and comprise nearly 8,000 sq ft of floor space. Francis S. Russell, president of the corporation, stated that recent increases in sales volume made it necessary to expand the facilities of the accounting and shipping departments.

NOW . . .

a TRULY Forced Air

INN-A-WALL

. . . and you can employ duct work where necessary!

● Yes, sir . . . here is *the* answer to heating properly small homes without basements. Security's INN-A-WALL is an entirely new principle in forced air heating! Requires minimum duct work . . . may be used without ducts. Needs only 16 by 20-inch floor area.

The INN-A-WALL reverses the usual flow pattern . . . warm air comes out the *bottom*. This means *warm floors!* Warm air can be taken from all four sides . . . return air, from all sides at the top. Where ducts are required for distant rooms, permanent connection is made at the bottom. Completely assembled . . . ready to install. Casing height, 88 inches. Security breather tube automatically supplies air for combustion.

Other outstanding INN-A-WALL values are • Quiet, positive blower • Fully automatic • Special Security high-efficiency burners • Complete adaptability to any floor plan • Amazingly economical in price.

SECURITY

Automatic, Gas-Fired

INN-A-WALL FURNACE

Write Today . . .
don't delay. Get all the facts about this revolutionary new furnace.

SECURITY MANUFACTURING CO.
1630 Oakland St. Kansas City 3, Mo.

Save minutes . . . save materials . . . save money! Get

SKIL Drivers

SKIL Drivers' adjustable double-slip clutches drive screws right: tight enough to hold firmly without stripping threads or shearing heads. You make adjustments in seconds—then drive 10 or 1000 screws to the proper tension without readjustment. With SKIL Drivers you get extra power to meet the most varied requirements. You get light weight and compact design for easiest handling in tight spots. Ask your SKIL Tools Distributor for a demonstration today. He'll show you how SKIL Drivers save minutes, materials, money!

SKIL Tools

SKIL TOOLS ARE MADE ONLY BY
SKILSAW, INC.
5033 Elston Ave., Chicago 30, Ill.
Factory Branches in Principal Cities
In Canada: SKILTOOLS, LTD.
66 Portland St., Toronto, Ont.

JOHN E. TOBIN has recently been appointed district representative for northwestern Ohio and northeastern Indiana district by the Hall-Neal Furnace Company, of Indianapolis. Mr. Tobin is well known in this territory, as he has been selling heating equipment there for the past four years. His home is Lake View, Ohio.

J. E. Tobin

G. E. Matthews

George E. Matthews has been appointed Michigan district representative for Hall-Neal. Mr. Matthews, a mechanical engineering graduate of the University of Michigan, has had 15 years experience in the heating equipment field. His headquarters are located 1404 Sigsbee Street, S.E., Grand Rapids.

Metromatic Mfg. Co., 15 Henderson St., Everett, Massachusetts, has announced the purchase of a tract of land amounting to 99,000 sq ft from the city of Everett. Purpose of the acquisition of this land is to begin construction of a $150,000 building devoted to the manufacture of the Metropac air conditioning unit and the Metromatic oil burner. The factory will be equipped with machinery of the latest design to facilitate volume production.

J. N. Crawford, director of sales of Bryant Heater division, Affiliated Gas Equipment, Inc., recently announced the appointment of W. Ned Rast and Joseph P. Cain as manager and assistant manager respectively of the company's branch office in Dallas, Texas.

Mr. Rast was formerly associated with Catlett Engineers. Prior to 1944 he had worked on several war projects and was connected with LaClede Gas and Light Co., St. Louis, Mo. He is an associate member of the American Society of Heating and Ventilating Engineers.

Mr. Cain was formerly purchasing agent at Bryant's Tyler, Texas factory.

W. N. Rast

J. P. Cain

SEVERAL PROMOTIONS have been made recently at Meyer Furnace Company.

Russell S. Quimby has been elevated from sales manager to general sales manager, and will direct all sales

the Alton Evaporative Cooler

"Best dealer's deal ever"

This year, ALTON'S Evaporative Cooler is the best offer you can make to your air conditioning customers. There are three points of profit in it for you.

1. You'll sell more ALTON Evaporative Coolers because they look like what they are, the finest evaporative coolers on the market. Their handsome all-galvanized steel cabinets suggests the protection they give to all working parts. The new 1950 Turbospray Water Distributing Assembly acting as both pump and spray minimizes servicing, puts sales appeal into the cooler; and the exclusive ALTON double mat arrangement that eliminates 'water pull-through' is added sales insurance. Available with fibreglas or aspenwood mats. Let the customers see the ALTON Evaporative Cooler and you'll sell it.

2. And ALTON will help you show it. Plenty of newspaper mats and customers literature is available around which you can build your promotion. Actual photos of installations in churches, J. C. Penny stores, factories, dozens of other business units where ALTON'S have been sold.

3. Protected territory plan. ALTON never duplicates when assigning territories and you have free rein in yours developing sales and profits. Write in for information. No obligation.

Visit ALTON, booth 313, at the Southwest Air Conditioning Exposition, Dallas, Jan. 23-27.

ALTON MANUFACTURING CO.

MANUFACTURERS AND ENGINEERS

1112 ROSS AVE. DALLAS, TEXAS

Your Insurance
FOR TIGHT, CEMENTED JOINTS

Don't take chances on furnace installation and repair jobs. Be sure with Grant Wilson's Asbestos Furnace Cement. It's tough, tight and tenacious. Manufactured under a special formula of long, selected Canadian Asbestos Fibres and other bonding materials, this superior cement grips the pores of cast iron and steel furnaces . . . keeps joints tight through expansion and contraction strains . . . stops dangerous gases from seeping through cracks, joints and seams. It's odorless, pliable and easy-to-use . . . does not shrink, crack or crumble.

Join the fast-growing group of heating contractors that *insist* on Grant Wilson's Asbestos Furnace Cement. Ask for the black and silver can on the next visit to your jobber. Send for free sample 1-A.

We Have Jobbers in Principal Cities

GRANT WILSON, INC.

Board of Trade Bldg. CHICAGO 4, ILL.
141 W. JACKSON BLVD. AT LA SALLE ST.

ASBESTOS PAPER	ASBESTOS MILLBOARD	FLEXIBLE
FURNACE CEMENT	PIPE COVERING	DUCT CONNECTIONS
PIPE JOINT TAPE	BOILER CEMENT	BOILER &
COLD WATER PASTE	ASBESTOS SPECIALTIES	TANK INSULATION

HESS
Climate Master Line for 1950

Here's a *profit-building* line of furnaces that includes a unit for every purse and purpose. Hess furnaces are easy to sell because they embody the highly efficient *square* design heat exchanger . . . offering more direct radiant surface for highest heat transfer . . . made of heavy gauge welded steel. They're easy to sell because each furnace is backed by HESS' 77 years of leadership in warm air heating.

SERIES "O"—Oil-fired Winter Air Conditioner. White baked enamel finish. In 3 sizes to 175,000 BTU.

COMPACT 80-P—High pressure oil burner. White finish. 80,000 BTU capacity. Ideal for utility rooms.

COMPACT 80-V—Vaporizing oil burner. Available in white or copperitone. 80,000 BTU capacity.

SERIES 100—Oil, gas, or coal fired Winter Air Conditioner. In 4 sizes up to 160,000 BTU. Copperitone finish.

SERIES 530—Oil, gas, or coal fired Winter Air Conditioner. Capacity to 240,000 BTU (oil fired). Copperitone finish.

SERIES 500 — Gravity unit designed for any fuel. In 5 sizes to 187,000 BTU capacity. Copperitone finish.

SERIES A—Standard Galvanized Cased Hess Furnaces for gravity or forced air. Coal, oil, or gas. 82,000 to 500,000 BTU capacity.

SERIES 61-63—For industrial and commercial applications. Oil, gas or stoker to 1,200,000 BTU.

SERIES "O"

COMPACT 80-P

COMPACT 80-V

SERIES 100

SERIES 530

SERIES 500

Distributors and Dealers! Here's a complete line for you—from one reliable old-line manufacturer!

Write today for details.

The Hess Company

132 N. CLINTON ST., CHICAGO 6, ILL.

SINCE 1873 OUR 77TH YEAR

New "Locking" Sheet Metal Tool

by

VISE-GRIP

- LOCKS to work with powerful non-slip grip
- Does more perfect forming
- Eliminates tiresome hand-gripping
- Adjusts to non-locking action
- Has extra deep throat

VISE-GRIP's Double Lever Action does it! Not only exerts multiplied jaw pressure, but also LOCKS jaws to the work. Easily adjustable to non-locking action—light hand-grasp exerts tremendous pressure to the jaws.

WIDE ADAPTABILITY Immeasurably better than any other hand tool for bending, forming, seaming, crimping or straightening sheet metal . . . holding templates, holding sheet metal for welding, working inside stacks, bending lead, etc. Guaranteed by the makers of the famous VISE-GRIP Wrenches. 8-in. long, Jaw width, 3¼ in. Throat depth, 1¾ in.

No. 8—8 in., VISE-GRIP Sheet Metal Tool . . . . . Only $2.95

VISE-GRIP Wrenches

The original Locking Wrench, now improved. Involute Jaw Curve holds all shapes. Has Knurled Jaw Tips, Thin Nose and Wire-Cutter.

No. 7W, 7" with cutter $1.75
No. 10W, 10" with cutter 2.50
No. 7C, 7" without cutter 1.65
No. 10C, 10" without cutter . . . 2.25

**Order from your supplier today.*

PETERSEN VISE GRIP MFG. CO. INC.
Dept. AA-1 DeWitt, Nebr.

activities of the manufacturing divisions of the company. Hugh C. Garver, Jr., assistant to the president, will assume responsibility for private-brand, government and project sales. Harold V. Walker, who has returned to the company after two years with Indian Motorcycle, has been appointed assistant sales manager. Charles A. Raper has been raised to advertising and sales promotion manager.

Ray W. Qualley, who has been chief product engineer, is promoted to factory manager, in charge of the Peoria and Peru plants. John J. Boland, chief application engineer, will supervise product design work henceforth.

Julius P. Heil • 1876-1949

JULIUS P. HEIL, founder and chairman of the board of The Heil Co., Milwaukee, collapsed and died Wednesday, November 30, when he suffered a heart attack while pheasant hunting on a private game preserve in southern Wisconsin. He was 73.

Long a prominent figure in Wisconsin industry and former governor, Mr. Heil was a typical product of our American free enterprise economy. He grew up on a farm, matured as a machinist, and pioneered in the welding process. As a young man he traveled widely throughout the world installing a newly patented process of welding street car rails. In 1899 he installed the first electric railway in Buenos Aires.

In 1901 he founded his own company with savings of $550 and hired three employees. Early products included welded truck bodies, storage and transport tanks. He weathered the first ten difficult years by working from twelve to sixteen hours a day for a salary of $2 per day.

Always a believer in diversification, Mr. Heil began the manufacture of oil fired home heating units and water systems in 1924.

Mr. Heil was active in countless social, civic, and philanthropic organizations. He served in guiding many local clubs, hospitals and charities in fund raising campaigns. In 1945 he was awarded a Doctor's Degree (L.H.D.) by Northland College at Ashland, Wisconsin, in recognition of his humanitarian activities and his service to his beloved State of Wisconsin.

Fred R. Bishop • 1879-1949

ONE OF THE BEST-KNOWN MEN in the Michigan warm air heating industry passed away on December 12th. Fred Bishop had been associated with the Brundage Company of Kalamazoo since 1926 and a fixture at conventions of the Michigan association since they began.

Mr. Bishop's record of service to the industry was a fine one. He had been one of the first instructors at the Short Course at Michigan State College and served in that capacity for 17 years. A member of the American Society of Heating and Ventilating Engineers he was a past president of the Detroit chapter. He was also one of the original members of the Installation Codes Committee of the National Warm Air Heating and Air Conditioning Association.

Mr. Bishop is survived by his widow, brother, four children and eight grandchildren.

A PRIZE PACKAGE FOR YOU

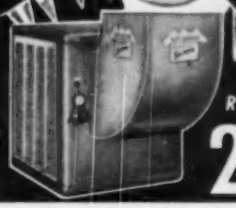
SIMPLY PLACE A SMALL INITIAL ORDER FOR FAMOUS

SNO-BREZE AIR COOLER SALES AGREEMENT

SNO-BREZE AIR COOLERS

We give you all the information and material you need to understand and promote this highly profitable business.

HERE'S THE PACKAGE



SNO-BREZE IS NOT JUST A FAN IT COOLS THE AIR TOO!

Retail from 29.75

- Tested and proven Sno-Breze units fully guaranteed.
- Complete selling, installing and servicing details.
- Eye catching, interest arousing animated display.
- Counter cards, string tags and direct mail material.
- Mat service and cooperative advertising program.
- 100% company paid newspaper ads in leading markets.
- Heard on several coast to coast radio networks.
- Seen in LIFE, TIME, BETTER HOMES & GARDENS and other leading national consumer magazines.

Get ready NOW to Snow-ball your profits with Sno-Breze.

MAIL COUPON TODAY FOR FULL DETAILS

Palmer MANUFACTURING CORPORATION
PHOENIX, ARIZONA DEPT. A-2
Branches in Los Angeles, Cal., Dallas & Lubbock, Texas

Please rush details on Sno-Breze sales package

We are dealers ☐ Distributors ☐

FIRM _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

41 YEARS AIR CONDITIONING LEADERSHIP

2 LITTLE GIANTS

2

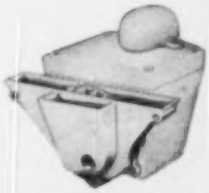
LITTLE GIANT VAPORIZER PUMP

This is a compact recirculating pump for a great variety of uses requiring low-pressure, high-volume performance. It will operate completely submerged or pick up within ½" of the bottom of the water supply. The impeller operates in a vertical position to eliminate loss of power by water direction change.

LITTLE GIANT VAPORIZER

The Little Giant Vaporizer breaks and projects water in a fine vapor-like spray. When used in evaporative coolers it thoroughly saturates the evaporator pad at all times. Spun glass pads may efficiently be used with this unit.

This is also the most efficient unit for humidity control, cooling condenser coils, and many other uses.



The housings of both units are of die cast aluminum treated and plastic coated to prevent corrosion in any water. The motor, their only moving part, is hermetically sealed in a five years' supply of oil.

They are quiet and free of vibration in operation.

Both units come in a series of sizes to fit any need.

Both units carry a two year guarantee against faulty materials or workmanship.

Write for further information on uses and statistics.

Little Giant Vaporizer Co., Inc.
3101 CLASSEN BLVD. OKLAHOMA CITY, OKLA.

Frank Henseler · 1864-1949

FRANK HENSELER of 3000 Lyndale Ave., Minneapolis, Minnesota died on December 6th, when he was visiting his son in Cincinnati, Ohio.

Mr. Henseler was a partner in Henseler and Naused Sheetmetal and Roofing Co., until the company was dissolved a few years ago. Another son and a daughter survive him.

Kruckman's Washington Letter

(From page 114)

but they can't hoard them. They must either give them away, or lend them, or spend them. We are told you find most business people who are in this fix in the swankiest restaurants eating the most expensive foods, drinking the most costly wines and liquors, and smoking the finest cigars. This works two ways: the citizen gets something for his money, and the government gets the high taxes placed on these luxuries. But the chief point is that the citizen does not feel as though his money has been confiscated, which is his uncomfortable sense if he must pay it into the state treasury without enjoying it.

Brannan Plan

You have naturally heard the Brannan plan discussed. It is bound to bring acrimonious debate. It will come up early in the session, and be discussed on the floor as well as within the committee hearings. It has already aligned the farm bureau people against the secretary of agriculture, and it has put former secretary, now Senator Anderson, of New Mexico, flatly in opposition to Secretary Brannan. Brannan is deemed the most influential man in the cabinet. He is a good politician, in the sense that a politician is good when he is capable and has the habit of success. His plan has caused many men and women to use many words in debate. In the simplest phrases it can be described as a system by which the farmer will obtain high prices for his products. And the consumer will be able to buy the same products at the lowest prices. Who pays the difference? Obviously the taxpayer. He supplies the funds which the government gives the farmer to support the prices, either as a frank subsidy, or as a payment to refrain from planting crops, and similar devices not unknown to Henry Wallace. It now costs us $5 billion to support the farmer in the style to which he has become accustomed since the days of F.D.R. They estimate it will cost at least another $5 billion to make the Brannan plan effective. It seems likely the Congress will eventually adopt the Brannan plan or something like it. The farmer has lost income to the tune of 10 per cent the past year. He wants the farm prices upheld. He is now doing his utmost to make Congress know it must do something that will be like the Brannan plan. So—be prepared for some more billions to go into farm supports.

Just this word about the pension and welfare bill which will be one of the major causes for congressional

Sell the "SILENT"

GIVE YOUR CUSTOMERS THE KEEN BEAUTY AND PERFORMANCE OF A MODERN OIL BURNING AUTOMATIC WINTER AIR CONDITIONING UNIT

Sell the "SILENT". That's a sage bit of advice now that competition is getting tougher. It enables you to provide new and replacement prospects with a modern, automatic winter air conditioning unit, skillfully designed to extract maximum heat from the fuel and distribute evenly a clean, healthful flow of properly conditioned air.

You'll find other jobs easier to get and customer recommendations better when the low economy figures and superlative performance of the "SILENT" are passed along. We'll be glad to send more information.

CHECK INTO OUR STEEL WELD GRAVITY LINE

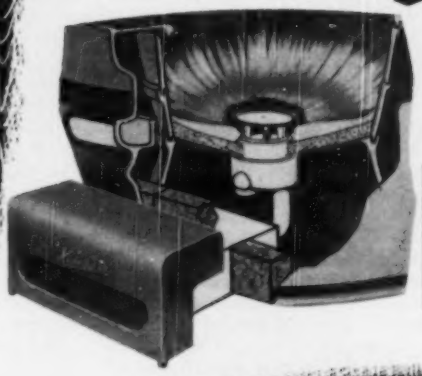
For installations where gravity furnaces are desirable you'll find the old, reliable Brenner Steel Weld a sterling performer. It's available in three sizes and easily adaptable to any size home or small business establishment.

PLEASE WRITE TODAY TO . . .

JACOB BRENNER COMPANY
Fond Du Lac, Wis.

CONVERT COAL or OIL FURNACES TO *Reinhard*® AUTOMATIC GAS OPERATION

Deluxe Model illustrated. AGA listed. Tested and accepted under American Gas Association listing requirements.



Reinhard patented "Air-Lock" Burners have proven highly successful since 1932. Their extreme efficiency, simplicity of installation and long life backed by the strong Reinhard guarantee makes them easy to sell.

No fan—no blowers—no ceramics are used.

We manufacture a complete line of gas conversion burners—domestic, industrial and commercial.

FREE BROCHURE
Write for FREE circular on the complete line of Reinhard "Air-Lock" Domestic Gas Conversion Burners. No obligation.

A few good territories are open for established manufacturers agents and distributors. Write for complete details.

The House of Reinhard

Dept. A-15

11 S. Ninth St. Minneapolis 2, Minn.

Now Only $2.00 for This Outstanding Book on Air Conditioning

The Third Edition of

AIR CONDITIONING FOR COMFORT

by SAMUEL R. LEWIS

288 Pages—6½" x 9¼"—Cloth Bound

Easy to understand . . . accurate . . . comprehensive . . . these are the features of this third edition of Samuel R. Lewis' well-known AIR CONDITIONING FOR COMFORT.

Fundamentals are fully and clearly covered. Correct procedure in designing complete systems for both residences and large buildings is explained step by step. In addition, considerable original data on such subjects as standards, noise control, measurements, and fire protection codes has been included.

Send $2.00 for a copy today to the address below. We know you will consider this one of the finest air conditioning books you have yet seen, but if you should be dissatisfied with it for any reason whatever, your money will be promptly returned to you.

KEENEY PUBLISHING COMPANY

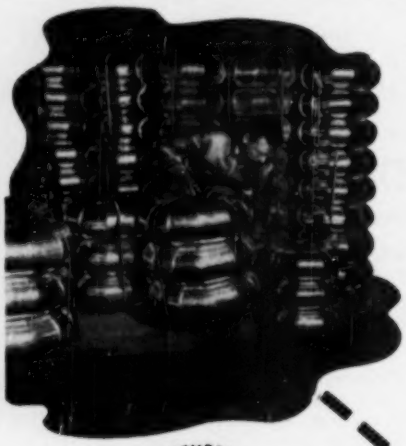
6 No. Michigan Avenue **Chicago 2, Illinois**

war this session: in the debates in the committee rooms, and on the floor it will be clear that the liberals who are radical have made the welfare program a camouflage in the form of the pension plan as the spearhead of their socialization drive. It is a clever maneuver because the pension demand is difficult for the politician to oppose; you may have noticed that even the politically austere Senator Taft talks softly and walks gingerly in the neighborhood of the pension discussion. It is seriously important to all classes of people. It is something almost every worker feels he and his associates are entitled to have. At the same time there are millions who feel the pension devised to cover 55 million workers, and a welfare program which will cost us $60 billion to $80 billion a year, by estimate of the house committee, is fantastic. It patently will benefit millions who will contribute the barest minimum to the common welfare. They will get just as much as those who contribute infinitely more in physical effort, in mental energy, and in ideas. The wonder is that some one has not launched a discussion of the profit-sharing plan which seemed to flower so successfully two or three years ago. In AMERICAN ARTISAN in January, 1947, there appeared an article written about the profit-sharing program operated by the National Cornice Works in Los Angeles, Calif. It was brought to remarkable effectiveness by W. H. C. Ness, president of the organization. This correspondent discussed his plan with Mr. Ness in Los Angeles, and was struck by the logic of a program which gives benefits to those who earn them in proportion to the extent that they earn them. Moreover, it impels the workers in the plant to become permanent parts of the plant, and to police it against those who are drones, or whose ineptitude or heedlessness makes them liabilities to the disadvantage of all the rest. There seems more reason in the profit-sharing plan.

Plans for 1950

The Securities and Exchange Commission with the Department of Commerce recently calculated that American business will spend 14 per cent less for plant expansion and equipment the first quarter of 1950 than it did in 1949. The report also pointed out that veterans will spend almost $3 billion the first six months of 1950, a large part of which is expected to go into residential construction—new and rehabilitation. In his personal survey of 1950 potentials, Secretary of Commerce Sawyer says the gross national product for 1949 was less than 2 per cent under 1948, the banner year. Leaving out the cessation of accumulation of business inventories, Mr. Sawyer suggests the total demand for the nation's output was higher in 1949 in both a dollar and a real sense. People purchased more automobiles, houses, and personal services, and less of clothing, and producers' plant and equipment.

Personal income was really higher in 1949, both in dollar and in purchasing power. Higher wage rates were reflected in the small reduction of the number employed. Corporations and farmers earned less in 1949. Declining prices cut the income of farmers. Lower prices as well as a smaller volume of industrial output affected the income of corporations. Industrial production was the weakest sector of the economy. In



. . . **Why There's NO ELBOW BENDING on arrival!**

Note the superior packing of Ohio Valley elbows assuring you of their arrival in the best condition. Convenient to handle . . . easy to ship . . . no bent merchandise on arrival!

This same particular packing care is taken with *all* Ohio Valley fittings, so they leave the factory and reach you in fine condition.

It pays to handle Ohio Valley fittings—it saves time . . . simplifies planning. Select and take advantage of Ohio Valley's specialized experience.

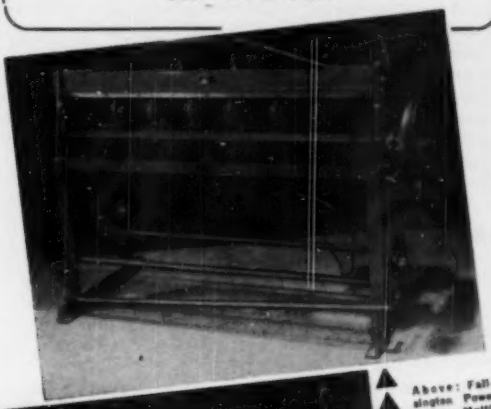
MEMBER NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION INDOOR COMFORT

Available Through Leading Wholesalers

Metal Manufacturing Division of
OHIO VALLEY HARDWARE & ROOFING COMPANY
Evansville 2, Indiana

FALLSINGTON
SHEET METAL MACHINERY

Designed for the Practial Sheet Metal Man



Above: Fallsington Power Driven Multi-Notcher. Available either power driven or hand operated.

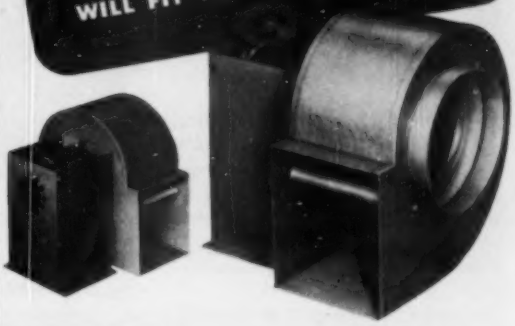
Left: HX 36 Husky Press. See photo below for sample of work done on this machine.

Fallsington means efficiency! Illustrated above are just two of the units which will put your shop on a real production line basis. On the Multi-Notcher dies are available for V-notches, Pittsburgh notches, and punching holes. Minimum distance between centers is 2¾". The Husky press is available in two models, H24" and H36". Bed area is 8" x length of machine. Sample cuts are illustrated below. Please write us for more information.

FALLSINGTON MFG. CO., Fallsington, Pa.

This photo shows just a few of the blanks that can be made on the Husky Press.

THIS SMALL, EFFICIENT FRACTIONAL HORSEPOWER TRADE-WIND BLOWER WILL FIT YOUR SPECIAL JOBS



for...

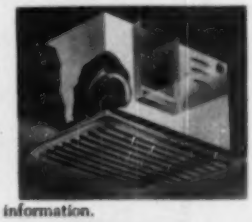
- spot cooling
- auxiliary supply air
- electronic equipment
- light dust from polishing or grinding wheels
- drying
- automatic doughnut machines
- small exhaust units
- heat treatment cabinets
- small fume hoods
- many other uses

TRADE-WIND TYPE "C" Conventional Blowers are small, single inlet, single width direct-connected units designed to produce a large volume of air efficiently, with a minimum horsepower requirement.

Every desirable feature has been incorporated in these blowers—discharge readily changeable to *any* position—fan cooled motor—convenient base mounting holes—conduit box and 2 knock-outs—knock-out in lid for toggle switch if desired—durable baked enamel finish in aluminum hammertone—smallest possible overall dimensions for use in restricted space.

Three models are available with 230, 340 and 500 CFM free air delivery and powered with motors from 1/30 to 1/6 H.P. Available at your wholesaler or mail the coupon for Bulletin 500.

TRADE-WIND ALSO MAKES THE FAMOUS CLIPPER KITCHEN VENTILATOR



These nationally advertised kitchen units are a profitable line for ventilating, heating and sheet metal shops. Mounted in the ceiling and vented to the outside, they provide complete ventilation for the kitchen, laundry, bath, den or other small rooms. Five models with Trade-Wind's exclusive, patented features for every type of job. Mail the coupon for complete information.

TRADE-WIND MOTORFANS, INC.
5703 S. Main St., Los Angeles 37, Calif.
Please send the bulletins checked below
☐ No. 500 on Type "C" Blowers
☐ No. 620 on Clipper Ceiling Ventilators
Name _____
Address _____

The ROCK ISLAND *Line*

STYLE
EFFICIENCY

PROVEN
QUALITY

Rock Island Registers are time and value tested for every type of installation. You can install them with full assurance of top performance under the most trying conditions. They will harmonize perfectly with any style of decorating and still will enable you to compete with ease on installations where price is a factor. Investigate this top-flight line of registers today. More detailed information is available.

Write today for a copy of our complete catalogue giving full information on our extensive line of Registers and Ventilating Grilles.

ROCK ISLAND REGISTER CO.

2435 FIFTH AVENUE, ROCK ISLAND, ILLINOIS

production of nonferrous metals, freight cars, and electrical appliances, the decline was substantial. Automobiles established a new record of production, 6 million cars and trucks. The $19 billion construction record topped the 1948 record by 3 per cent. Over 1 million non-farm residences were started in 1949, exceeding the record of 1925. Farm production was large. This circumstance, following the bumper crops of the previous year, accounted for the decline in prices.

Another review reported department store sales up; the metal working industry was expected to have a good first quarter in 1950. Machinery production is expected to go up; packaging was reported promising; air conditioning, ventilating, and heating industries report good 1950 prospects. Plumbing and heating industries reported they will be running at top speed early in 1950.

Sales Future

(From page 107)

cessful installations are making up for the loss.

5. Do any of your salesmen consistently sell jobs on which you lose money.

The answers to these questions may surprise you.

After you have these answers, and your shop purring, with every man giving you eight hours honest labor for eight hours pay, look around the front office.

Is your administration overhead too high, by virtue of having been acquired to handle orders in the days when customers would walk in and buy everything in sight? Do your clerks appear to be just putting in time until they are due for retirement, or you fold up, because you did not look around soon enough?

Do you have salesmen sitting next to the telephone waiting for it to tinkle gently, and remind them that prospects are still interested in hearing about your product?

There is no better time than right now to take stock of all your personnel; especially your executives. Have you given any young men a chance to work for you, and perhaps contribute new energy and ideas which might prove to be plasma in the veins of your organization? If you have an aggressive youngster on the staff, give him man size responsibilities. Remember the mistakes you made at his age, and look at yourself today. Not doing so badly, are you?

If you are in the mood for reminiscence, remember that economic history has repeated itself in the past. Depressions have occurred in 1836, 1857, 1873, 1893, 1907 and 1929, on an average of one every 19 years. You do not need a slide rule to calculate why Mr. Average American is being cautious and holding onto what money he has.

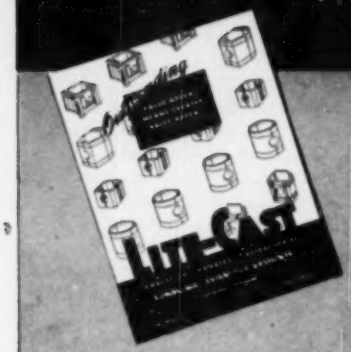
Actually, Mr. Average American, in his caution, is helping you dispute the old belief that history must repeat. He is also setting the stage for the entrance of a troop of promising merchandisers. They will have to prove their talent, however, before winning the prize, which will permit them to wishfully dream, as the fortune teller describes a blissful summer cruise through calm southern waters.

Are you going to be one of them?

LITE-CAST—COMBUSTION CHAMBERS

Engineered for

Quality • Efficiency • Performance!



ROUND
For use in warm air furnaces and round boilers.

PEAR SHAPE
(Pat. #2075433)
Made in 8 sizes to meet all domestic oil burner conditions.

Everything included in wooden box for complete installation.

Send for our new 12 Page Illustrated Catalog, containing valuable specifications and information on combustion chambers.

We Specialize in sizes and shapes for almost every application
Truly "TIME TESTED"—over 15 Years of Top Performance in Domestic Oil Heating.

PHILADELPHIA 4 **MONOGRAM PRODUCTS COMPANY** PENNSYLVANIA

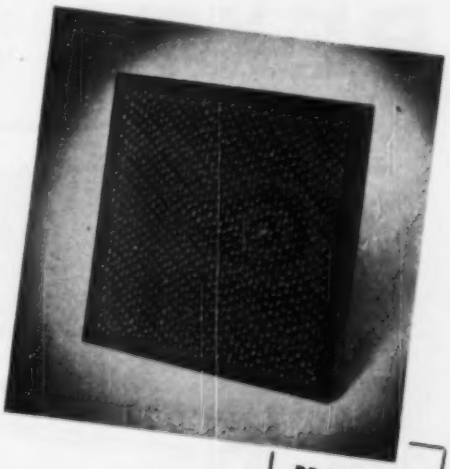
Designers & Manufacturers

Sell the
DETROIT
air filter

with WICK-ACTION

TO SECURE SATISFIED CUSTOMERS

With "Wick-Action" the passageways through the filter are kept open, therefore more air is allowed to flow through the filter which gives more efficient operation of any air conditioning unit.



PROVE IT!
. . . test a
WICK-ACTION
filter yourself

DETROIT AIR FILTER CO., INC.
P. O. Box 407 Woodstock, Illinois

Write today for literature

Roberts—Cost Control

(From page 109)

payment and extra profit returns this within a short time.

9. Check job costs. All financial accounts may be accurate and adequate but unless jobs are costed there will be no indication of where to investigate in case of a low profit or no profit. To cost jobs accurately, use special costing forms. Financial accounts, no matter how accurately kept, will not enable the dealer to cost each job to determine job profit or loss.

Tighten Credit

10. Credits and collections. This expense must be observed because it may increase if money tightens. Best method of control is to grant credit more carefully. Some businessmen, when sales drop, give credit more freely, use it as sales bait. This increases operating costs through higher collection expense and greater bad debt losses. Survey credits and collections very carefully from now on.

A Reasonable Salary

11. Every contractor should include a salary for his own services in costs, but should not charge operating expense with more money than he is worth just because he happens to own the business. This distorts cost analysis. He should charge a reasonable salary for services rendered. If more money is required, it can be charged to a personal account, which is transferred to net worth or surplus at the end of the year and not to profit and loss.

In some instances, the owner may have to cut his salary in order to effect the necessary cost control in a buyer's market. Businessmen who have been drawing inflated salaries because business was on a high level, must cut their compensation with the decrease in profit. If the business earns less, the owner must take a smaller salary as its manager.

12. More effective personal supervision. Often the eye will see what figures won't reveal, and so, the reader should closely observe all operations. Materials used on jobs should be accounted for in greater detail than has been customary in the past. Impress workers with the necessity for keeping costs down. Some concerns give their employees a share in any cost reduction as an incentive for them to be alert. See that mechanical equipment is inspected regularly and properly oiled. This reduces the cost of repairs and breakdowns, which delay operations.

Analysis Needed

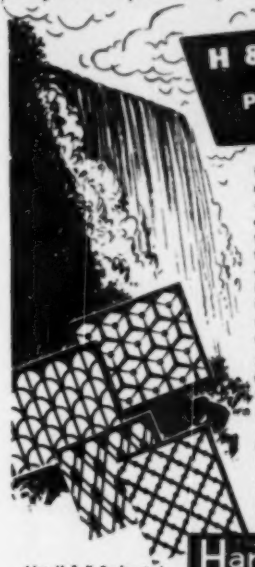
Cost control is a managerial job as well as an accounting chore. The best books in the world won't cut costs. They merely record figures. From that point on, it is necessary to study the figures and by competent analysis decide what to do to keep costs in line with net profit desired.

PEXTO NEW 8 FOOT SQUARING SHEARS

No. 196—8 ft. 18 Gauge Foot Shear.
Precision Rack and Pinion Back Gauge . . . Positive cam actuated Hold-down . . . Rugged welded steel Treadle and Crosshead.

THE PECK, STOW & WILCOX CO.—SINCE 1785—Southington, Connecticut, U.S.A.

Ageless Beauty — Lifetime Utility



H & K GRILLES of PERFORATED METAL

In architectural designs — classic or modern — ornamental or functional — H & K Perforated Metal Grilles are world renowned for their beauty and lasting high quality. Perforated from durable wrought metal sheets for centuries of service! Choose from a practically unlimited variety of patterns . . . designed to harmonize with all styles of interior and exterior construction.

Choose H & K Perforated Metal Grilles of steel, brass, bronze, stainless steel or aluminum. Order them in rectangular, square, round or odd . . . flat, curved or angular. H & K mass production facilities bring them to you at lower cost. Dependable H & K service gets them to you promptly. Illustrated catalog available — write for it!

Also H & K Perforated Metals and Sheet Materials for Industry

Harrington & King Perf. Mfg. Co.

5649 FILLMORE ST., CHICAGO 44, ILLINOIS
114 LIBERTY ST., NEW YORK 6, N. Y.

PRACTICAL PRODUCTS *for Industry*

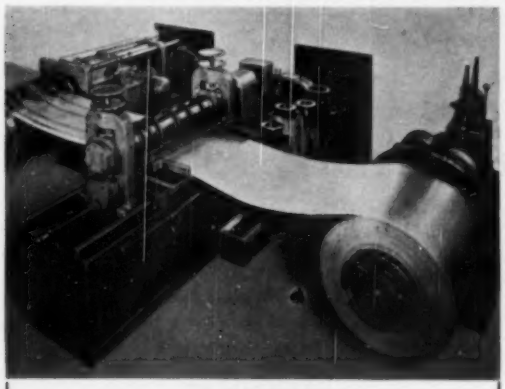
ROYAL CLIPPER METAL CUTTER

Converts your ¼" electric or pneumatic drill into a metal cutter in a few seconds.

- **THE REGELE STRAIGHT EDGE—** Specially-hardened and tempered to "take it". Flexible, light in weight and low in price.
- **"NUT-EZE"—** An exceptionally high-grade and effective penetrating oil for industry—"works like lightening".
- **THE HERCULES BENCH SHEAR AND ROD CUTTER—** A brute for strength, yet weighs only 6 lbs. Needed in every shop.
- **MASK—** A new and different shielding liquid that eliminates the need for masking paper in industrial spray painting.
- **C-B METAL SHRINKER AND STRETCHER—** A "must" wherever metal angles or trim need forming. Low in price—efficient.

Choice territories open. Further information from

M-M-A, INC.—Box 411—Lancaster, Pa.



". . . we're looking for slitting business, too!

Complete equipment for quickly and efficiently slitting and shearing sheet metal to any width up to 36" and any length desired, in 14 gauge metal and lighter.

Write us for details . . . prompt attention is guaranteed.

"Made-Rite" Co., Inc.

10th and Monroe St. Newport, Ky.

UNO Mototurb

Whirl the head of a turbine vent and pick up papers off your desk.

What other ventilator will do it?

Jobbers in 40 States Sell Them

UNO VENTILATOR CO.

Cliftondale Station Saugus, Mass.

Blower Market

(From page 132)

vantages forced air offers.

Air stratification, uneven heat, and resulting uneconomical use of fuel are three things that are sometimes encountered with a gravity furnace. Temperature variations between ceiling and floor may also be found. Securing steady, even heat in a room directly over the furnace and in one 20 ft away is a difficult problem.

In recent years many homeowners have had conversion burners installed with the hope of eliminating inconvenience and securing greater comfort. Automatic heating is obtained but deficiencies in the supply system often show up. When the furnace was fired by hand the owner kept shoveling coal until all areas were heated; but now the thermostat may be satisfied and the system shut down before some of the more distant rooms are comfortable.

This particular situation is solved by the addition of a blower and the purchaser secures advantages that are offered only by winter air conditioning. Continuous, controlled circulation of clean, filtered humidified air is characteristic of such a system. A package blower plus an automatic humidifier will supply these benefits.

Intermittent forced circulation of air has in the past proven itself to be more effective than gravity circulation and a new theory of control and adjustment has been evolved which is the most effective of all. This is C-A-C or continuous air circulation, a method of controlling the speed and cycle of blower operation so as to maintain controlled circulation of air at all times when outside temperatures warrant. C-A-C maintains a healthful, comfortable, uniform warmth from floor to ceiling. Stratification is avoided by the constant circulation and even heat is assured in all rooms.

Benefits of C-A-C

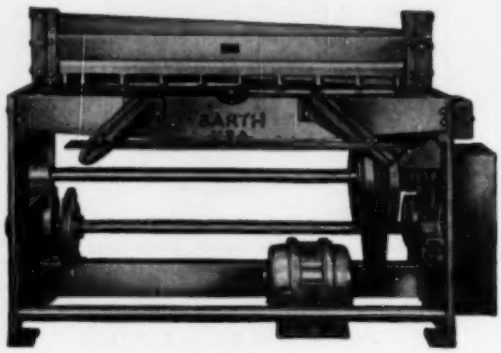
Five principal benefits are attributed to C-A-C, and the combination of a gravity furnace, a package blower, and the proper controls will assure the homeowner of all these benefits:

1. Warm floors with no temperature stratification.
2. Constant flow of heat to all rooms. The required heat is supplied to each room, regardless of distance from the furnace. C-A-C eliminates the possibility of a blast of cold air when the system goes into operation or a heat overrun at the end of the blower on cycle. Fluctuation of temperature of entering air can be held within a range of 5 F.
3. Low register velocity curtails drafts or air noise. Quieter blower operation is also obtained.
4. Sensitive response to thermostat. Close balance between heat requirements and heat delivery insures even room temperature.
5. Maximum cleanliness of air due to continuous recirculation through air filters.

With the type of additional equipment and controls now available, it is possible for the owner of a gravity heating system to enjoy the best in *Indoor Comfort* at low cost.

BARTH

MODERN METAL WORKING EQUIPMENT



No. 1452

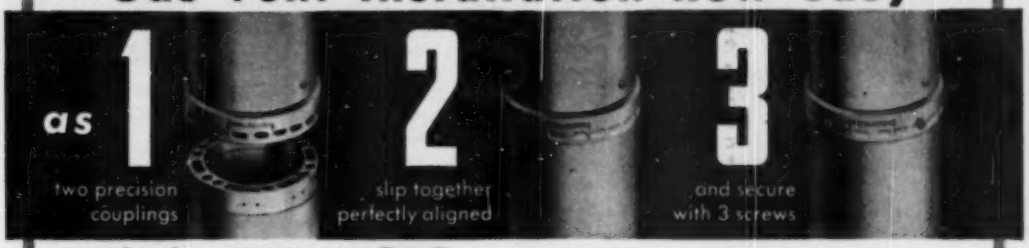
BARTH sheet metal working tools keep step with every major stride of the industry. When you install one you make a definite contribution to progress. You meet a modern need with a modern tool! Write for latest catalog.

PRODUCTS

Power Squaring Shears
Foot Squaring Shears
Foot Gap Shears
Bar Folders
Forming Rolls
Slitting Shears
Bar & Rod Shears
Combination Deep Throat Bench Machines
Wiring Machines
Edging Machines
Turning Machines
Burring Machines
Flanging Machines
Crimpers & Beaders
Brace & Wire Benders
Bench Plates
Cast Iron & Steel Stakes
Rivet Sets
Hand Groovers
Hand Bending Brakes

THE BARTH MANUFACTURING CO., MILLDALE, CONN., U.S.A.

Gas Vent Installation now easy



with the NEW QC METALBESTOS

The fastest and easiest to install of any gas vent and flue pipe!

In just 3 easy steps, Metalbestos is perfectly aligned and perfectly sealed. No cutting, crimping, hole punching or tedious fitting. Adjustable lengths, and adjustable elbows simplify and speed your planning and layout, too.

Metalbestos' famous double-wall, all-metal, pipe-within-a-pipe construction assures maximum insulation, quick, efficient draft conditions and high resistance to corrosion. Metalbestos meets all requirements of Underwriters' Laboratories for Type B Gas Vent and Flue Pipe.

WILLIAMS-WALLACE CO.

140 HOOPER STREET SAN FRANCISCO 24, CALIFORNIA

MERCOID SENSATHERM FOLLOWS ROOM TEMPERATURES WITHOUT ARTIFICIAL AIDS

The merit of a thermostat is determined by the quickness of response to temperature changes.

Some thermostat makers found it necessary to resort to accessory boosting devices in attaining adequate temperature response. Under favorable temperature conditions they seem to serve their purpose, but under certain conditions they defeat their purpose.

The Mercoid Sensatherm is a "natural" and stands on its own inherent small mass construction and manner of operation by which it follows temperature changes quickly as they occur on a variation of ⅓ degree F., above or below the point set.

It has the additional advantage of a corrosion-proof mercury switch, assuring better performance and longer control life, with practically no attention. Its beautiful permanent metallic finish retains its luster for a lifetime.

The Sensatherm represents a profitable buy to the trade and householder.

THE MERCOID CORPORATION, 4219 BELMONT AVENUE, CHICAGO 41, ILLINOIS

Human Tensions Unique Sales Approach

(From page 105)

were prone to lay off once they had a few dollars. Their wants were few and a few days work a week would bring them all they needed. In a unique effort they placed Sears, Roebuck catalogues in the hands of all employees. The workers looked through the pages, became discontented with their clothes, their homes, their daily standards of living. A tension was planted and grew.

Relief Was Needed

Soon absenteeism dropped off entirely. They had to work to find relief from the tension. They did not buy the articles primarily because they wanted them—note this: they bought because they were unhappy without them. The unhappiness was a deliberately planted tension which would only be relieved by working for money.

Reminder Selling

Locate forgotten tensions. This is a form of reminder selling. You bring up a forgotten tension during the course of a selling conversation. You describe and elaborate in detail upon a situation, a hunger, a problem that must have occurred in the experience of the prospect and discreetly warn against putting it away again. Many items are sold on this selling theme—a food manufacturer reminds you of unexpected guests and how embarrassed you were last time; a new tire jack recalls the time you had a flat and a clumsy jack; banks keep reminding you that some day you'll need money and you should save for it now. Appetite items, too, keep reminding you that you'll want this or that for supper tonight.

The Appeal Can Backfire

Folks fight off suggestions to buy. Sometimes they resist your efforts to plant a tension within them. It is not difficult for them to shift their thinking so that you become the tension and they hate you for bothering them. That's why we hear so many complaints about door-to-door salesmen. This tension form of selling must be woven into the sales talk discreetly and not as a threat. "Only five more days before Christmas" is reminder selling or an effort to sustain a tension that the observer is constantly forgetting. In selling a furnace, for example, you don't need to say bluntly, "Don't take chances, it's going to be a cold winter." No, you can as easily build tension through locating a forgotten need with, "Were you in town last January? Wow, wasn't the cold terrible?" The customer will carry on from there.

Enlarge mild tensions. Amplify those tensions which

NATIONAL OIL HEAT EXPOSITION

COMMERCIAL MUSEUM, PHILADELPHIA • APRIL 24 thru 28, 1950

Oil-Heat Institute of America invites all eligible companies which have not yet made their reservations, to exhibit their products at the NATIONAL OIL HEAT EXPOSITION to be held at Philadelphia, Monday, April 24 thru Friday, April 28, 1950.

This National Exposition of equipment and products of the Oil Burning and Allied Industries will be held in Philadelphia's famous Commercial Museum, the scene of other great shows sponsored by OHI.

In conjunction with the Exposition, OHI of America will hold its 27th Annual Convention.

Taking place in the heart of the Industry's largest sales area, the 1950 Exposition presents a real opportunity to all exhibitors. The Exposition and Convention will be the occasion for the gathering together of Manufacturers and Dealers in large numbers from all sections of the United States and from foreign countries.

Whether or not your company is a member of Oil-Heat Institute of America, it is invited to exhibit if eligible.

It promises to be the largest NATIONAL OIL HEAT EXPOSITION ever held. Have you reserved your space? We advise that you ACT NOW.

For Information and Floor Plan address or phone: **OIL-HEAT INSTITUTE OF AMERICA** • 6 East 39th St., New York 16, N. Y., MUrray Hill 5-1638

OIL HEAT—PROVED AND APPROVED BY MILLIONS OHI

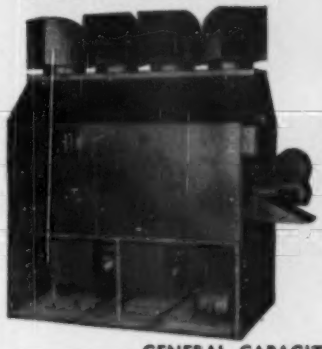
NATIONAL CHAMPION — GAS and OIL BURNING

HEAVY DUTY FORCED AIR UNITS FOR LARGE SPACE HEATING REQUIREMENTS

NATIONAL HEATER COAL FIRED FORCED AIR UNIT

Specifically constructed and designed for stoker and hand firing with blower position at rear or side of casing, this unit embodies all the features of other NATIONAL heaters for greater satisfaction and economy of operation. Can be quickly and efficiently converted to light oil, heavy oil or gas firing as future fuel costs and supplies may necessitate.

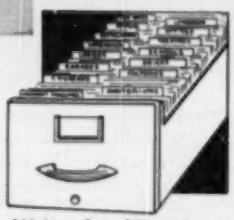
DIRECT FIRED UNIT



A self-contained unit with adjustable discharge heads for positive heat delivery in any direction. Streamlined fire box of high heat and corrosion resisting Type 310 Stainless Steel insures a far longer life of service and satisfaction. Tear Drop combustion chamber design and convector tube arrangement affords complete efficient air wipage of all heating surface at minimum resistance. Available in models for central heating systems employing supply and return ducts.

WIDE RANGE OF APPLICATIONS

These units have proven practical and economical for most types of public, commercial and industrial buildings. National Champion heaters are the product of over a half century of experience in this field and the latest advanced engineering features of these units have been tested in a rapidly increasing range of actual installations.



Write for Literature

GENERAL CAPACITY DATA

OIL & GAS FIRED HEATER

Model Number	Btu	Cfm	hp	Dimensions (Inches) length	width	height	Approximate Shipping Weight
T. D.— 25	250,000	3,600	¾	60	32	81	1,300 Lbs.
T. D.— 40	400,000	5,400	1	60	32	81	1,350 Lbs.
T. D.— 50	500,000	6,600	1½	80	32	81	1,780 Lbs.
T. D.— 70	750,000	8,800	2	80	32	81	1,855 Lbs.
T. D.— 80	800,000	10,200	3	80	48	81	2,110 Lbs.
T. D.—100	1,000,000	12,500	5	80	48	81	2,200 Lbs.
T. D.—125	1,250,000	15,300	5	100	54	103	3,000 Lbs.
T. D.—150	1,500,000	19,400	7½	100	54	103	3,250 Lbs.

NATIONAL HEATER CO. • CLEORA & VANDALIA STS. • ST. PAUL, MINN.

Beverly TOOLS MEAN BETTER WORK

THROATLESS SHEAR

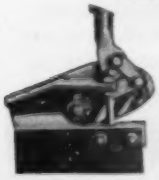
Make straight or intricate cuts in the lightest metals without distortion, yet handle heavier gauges with ease on a BEVERLY — the all-around Throatless Shear. Made in 4 models to handle 18 gauge to 3/16". High Carbon, High Chrome Blades available for cutting Stainless Steel up to 10 gauge.

CABLE CUTTER

Cuts wire rope up to 11/16" dia. quickly and cleanly at one stroke. Also handles heavy electrical cable, armored cable, steel reinforced rubber hose, etc., with ease. Snap-Action Hold Down assures faster operation.

INSIDE SLOTTER

8" reach. Inside Slotter, designed to make inside cutting and slotting faster and easier. Capacity up to and including 16 ga. mild. Cuts slot 2½" long x ⅛" wide with one stroke. Unique arrangement of 5 H.C.H.C. blades assures clean, accurate cutting.

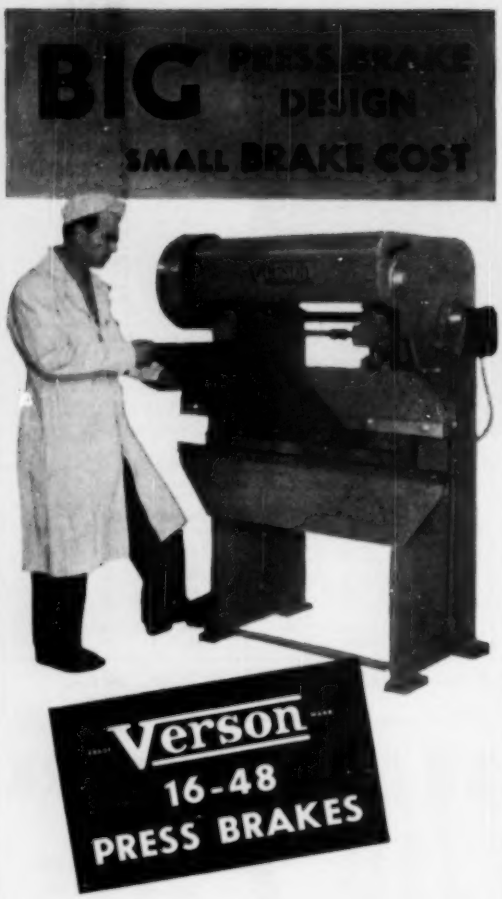


SLITTING SHEAR

All steel welded construction, plus extra built-in strength keeps the "S-3" Slitting Shear cutting clean indefinitely. No springing of blades, no distortion after use. Slitting capacity ¼" mild steel; trimming capacity 3/16"; bar capacity ¼" x 2". Stainless steel capacity . . . 10 gauge (If equipped with High Carbon, High Chrome Blades.)

See your Dealer or write direct for illustrated catalog sheets on Beverly equipment.

THE BEVERLY SHEAR MFG. CO.
3020 W. 111th Street
Chicago 43, Illinois



Shops that are wasting manpower with hand brakes or tying up big machines with small odd jobs have the answer to their problems in the new Verson 16-48 Press Brake. Compact and low in cost, the 16-48 brings the advantages of power operation and big brake design to smaller shops. Bed and ram length is 48". Capacity ranges from a 48" length of 16 ga. steel to a 24" length of 10 ga. steel. Allsteel construction assures perfect alignment and maximum rigidity. Write for a copy of Bulletin 16-48A; it gives complete design details, specifications and capacities.

VERSON ALLSTEEL PRESS CO.

9322 S. Kenwood Ave. CHICAGO 19, ILLINOIS — Holmes St. and Ledbetter Dr. DALLAS 8, TEXAS

THERE'S A VERSON PRESS BRAKE FOR EVERY JOB FROM 15 TONS UP!

the prospect may otherwise accept and dispose of without buying. People have noticed a trace of blood on their toothbrushes for years, yet when a toothpaste manufacturer sold them on the idea that here was something to worry about (a magnified tension) they rushed to the stores to buy the toothpaste which would relieve the condition and satisfy the tension. You understand the "pink toothbrush" did not bring sales, that existed before. It was the tension that was magnified by the advertiser. As long as a person does not worry (is under no tension) his most serious affliction will not produce action. If you can get people to worry over dandruff they will buy relief. We got along very well without television for years and you may still be doing so. But let enough people ask you, "Did you see the television program last night. You certainly missed something," and soon you'll be uncomfortable in your apparent lack. This tension can produce a sale. A gray hair in the head is nothing until you worry about it. If I threaten you with social ostracism because of bad breath, your tension will drive you to purchase my offered relief. I must magnify the tension to produce action. And, with busy people the magnification must be greater. The hypochondriac is at the opposite end—he goes looking for tensions. See what I mean?

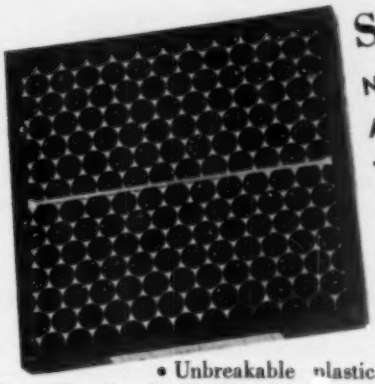
Close Soon Enough

Speed up slow moving tensions. No sale is ever made unless somebody with an idea for buying, actually moves to make the purchase. Many a salesman is flabbergasted when he faces a prospect who is vitally interested, listens attentively and refuses to buy. Such cases prove that you can build up an apparently convincing story and because you did not think of closing early enough you ended the story without a climax. You must introduce the element of time in every sale and not wait for the end. If you're going to sell a man a sailboat and you talk to him in early spring you can safely start the conversation with, "Well, here we are, spring hardly here and summer almost gone," or some such phrase. Then when you reach the close of your sales talk you won't need pressure selling. The element of timing will be natural because the time-tension is already at work. In speeding tensions you also use price advantages for buying now, dangers to health if delays are taken, etc. When the prospect is laboring under a moving tension, a sense of impatience develops and he buys because he is prodded by his own wishes. Again you have created a vacuum and a sale rushes in to fill it. True, this is simply a change of attitude from selling to making the prospect buy, but it does produce better results, smoother selling, and more satisfied customers.

Thus, in summarizing, you must Search, Adopt, Locate, Enlarge and Speed tensions. If you will take the first letters of these words you will see that they spell "SALES."

The entire theory of this principle of tension control is one of attitude—the attitude of the seller. You are

The PLASTI-STATIC AIR FILTER *features*



SIX NEW AIDS TO AIR CONTROL

• Unbreakable plastic filament • Less "handling" hazard • Natural impinging qualities • Greater dust holding property • Metal screen center sandwich pad • Plastic filaments are non-combustible. Write for details today.

MASTER PRODUCTS CO.
7000 So. Wentworth Ave. - - Chicago, Ill.

MAKE PROFITS — — FAST!

On any cutting job — this is the ideal shear. It does the work *quicker, easier, better!* Available in hand-operated or motorized models for irregular shapes and straight splitting. Any size sheet.

MARSHALLTOWN THROATLESS SHEARS

Cutting speed 6" to 9" per minute.
PROMPT SHIPMENT
Send today for special information bulletin.

MARSHALLTOWN MFG. CO.
910 E. NEVADA ST. MARSHALLTOWN, IOWA

MEMO...

From: Galvan Mfg. Co.
TO: The Sheet Metal Trade

We can now supply the NEW GALVAN Conductor Pipe Elbows as well as "Crary's" Cut-Offs, and "Tite-Top" Funnels. With your next order to your jobber ask him to supply . . . . .

GALVAN Conductor Elbows
GALVAN "Crary's" Cutoffs
GALVAN "Tite-Top" Funnels

GALVAN MFG. CO.
NEW ALBANY, IND.

DEALERS -this is NEWS

A
REALLY LOW-COST
TOP-QUALITY
Automatic Heating Package
for SMALL Homes
★
Compare the . .

Majestic UTILITY FURNACE Oil or Gas

Send for Bulletin TODAY!

The *Majestic* Company — *Heating Specialists Since 1907*
10 Erie St. Huntington, Ind.

I'm interested in details of the — ☐ upflow or ☐ downflow — Majestic Utility Furnace. Send bulletin — without obligation.

Name ..... Position .....
Company .....
Street .....
City ..... Zone ..... State .....

Another Money Maker For You

CONCO heat

The New CONCO PORTABLE *Electric* RADIATOR

RETAILS Regularly at **$22.95** 4500 BTU

OUTSTANDING FEATURES

SAFE Underwriters' Approved. No liquids used. Consumes 1320 watts, A.C. or D.C., emitting 4500 BTU's per hour, the equivalent of 18¼ sq. ft. of steam radiation.

FAST Starts heating as soon as plugged in. Radiation and convection heating provide warmth to all parts of the room.

LIGHT Easily portable. Weighs only 28½ pounds. Carrying handle doubles as drying rack.

ECONOMICAL Heats for one hour for approximately 2 cents, average U. S. rate. *Write for complete information.*

CONCO ENGINEERING WORKS, Division of H. D. Conkey & Co., Mendota, Illinois

AFFILIATES: *Conco Materials Handling Division, Cranes - Hoists*
Conco Building Products, Inc., Brick - Tile - Stone

See our exhibit, Booth 488, Housewares Show.

not selling, you are developing vacuums which can only be filled with your product. You are creating human tensions which move toward your product for satisfaction. You work on the prospect with the qualities of the product in mind. In short, you do not sell the product—you make it wanted, needed. The resulting sale is inevitable.

Get A Tax Refund

(From page 111)

tax return, must be adjusted to show 100 per cent. Just as in Schedule D of your tax return, you should compute your net capital gain or loss. But this should be done separately for business and nonbusiness items. Your net nonbusiness capital gain can be offset by a part of your nonbusiness deductions *if* they are not fully offset by nonbusiness income. Any remaining net nonbusiness capital gain can be applied as an offset to a net business capital loss.

"Under the federal income tax law the income of a partnership is taxed in the hands of the individual partners. The partnership, itself, is not a taxable entity. For this reason the partnership net operating loss must be allotted to the individual members who may then apply their own shares as a loss deduction on their personal tax returns.

"The partnership loss is divided among the partners according to each one's share in the ownership of the enterprise, in the same way as the division of profit and loss. In making the allocation of loss to each partner,

You don't buy just fittings when ordering YOUNGSTOWN'S . . . you're also getting full efficiency because **YOUNGSTOWN FITTINGS FIT!**

You can't settle for less than full efficiency on *every* job these days. Competition is tough and the man who can initiate short cuts and provide a top flight job for his customers is the one who will get the bulk of the business.

That's one of the reasons why it pays to standardize on Youngstown Fittings. They *always* fit the first time, no cutting, juggling, or fitting, and the time you save you can use to good advantage in hunting up more profitable work.

We know our fittings will go in right the FIRST time because we build them that way. They're machined to the finest detail to be certain always of a perfect fit. Your jobber can supply you, but if not just drop us a line for any assistance you need. We'll be glad to help.

YOUNGSTOWN FURNACE CO.

627 Marshall Street **Youngstown, Ohio**

SAVE HUNDREDS of DOLLARS HOURS of TIME

with the amazing new

TRI-SAW

Portable All-Purpose *Power* Saw

Cutting jobs of all types are easy, fast and economical with the Tri-Saw. This streamlined, all-purpose power saw cuts directly into wall surfaces without starting hole . . . . . cuts through sheet metal and heavy metal in a jiffy, leaving neat, sharp edges. Fits any ¼" heavy duty electric drill. Will not twist or spin. Accommodates easy-to-change blades for every type of cutting operation. Pays for itself quickly, gives years of time-saving, trouble-saving, money-saving performances.

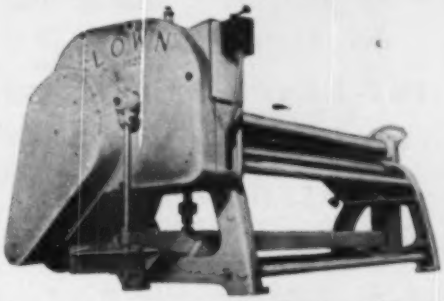
$35.00 F.O.B. ST. LOUIS

TRI-SAW CORPORATION

6611-A Clayton Road St. Louis 17, Mo.

Distributors and Jobbers Wanted

LOWN SLIP ROLL FORMING MACHINES



Model B-600 Series—4" diameter

B-600 SERIES

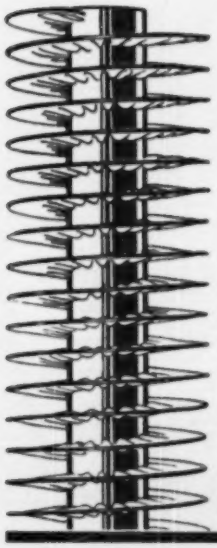
- A new, improved, modern design, heavy duty machine, engineered for durability, strength and service.
- SELECT THE BEST . . . LOWN Slip Roll Forming Machines are versatile . . . dependable . . . easy to operate.
- Write for bulletins!
- LOWN Slip Roll Forming Machines are built in a range of sizes from which you can chose the exact unit for your requirements.

San Angelo Foundry & Machine Co.

San Angelo, Texas . . . . . 1000 East Upton

Distributors in Principal Cities

AEROFIN



FIN-TYPE COILS For Fast, Efficient HEATING *and* COOLING

Write for Information

AEROFIN CORPORATION

S. Geddes St. Syracuse 4, N.Y.

OBDYKE

IMPROVED EAVES TROUGH FOR BETTER JOBS

No More Ragged, Sagging Inner Edges

Our hemmed and fluted inner edge combines great strength with safer handling at no extra cost to you. Try it and join the ranks of satisfied users.

BENJAMIN P. OBDYKE, INC.

443-453 N. 8TH. ST. PHILADELPHIA 23

ANNOUNCEMENT

We have appointed

THE FAMOUS FURNACE COMPANY of LORAIN

Located at

125 East 20th St., Lorain, Ohio as our Sales Representatives to better serve the needs of our customers in this area.

The Famous Furnace Company

6420 Woodland Ave.,

Cleveland, Ohio

it is necessary to assign to each his personal share of the income and deduction items. The adjustments for tax-exempt interest, business and nonbusiness items, including capital gains and losses must be made in each case. Long-term capital gains and losses must be counted at 100 per cent of their value. A schedule showing the calculation of the net operating loss should be attached to the partnership information return, Form 1065, which must be filed annually under the income tax law."

When you have determined the amount of your net operating loss, certain adjustments must be made in your income and deduction items for each of the years to which the loss is to be carried.

The adjustments in income in the carry-back year to determine the amount of the operating loss deduction are very similar to those which must be made for the operating loss itself. The principal difference is that a separate treatment of business and nonbusiness items is not necessary. Long-term capital gains and losses, which in the tax return are counted only at half of the actual amount, are adjusted now to show the *full* amount. All *net* capital losses may be deducted. In other words, if you lost more than you made, you take your net loss—the total loss figure, minus the total gain figure—off as a deduction.

Again, interest received on tax exempt securities must be included. But, again, only the net interest counts; if you borrowed money and paid interest on it in order to buy the securities, then you can count the interest you pay off the interest you receive.

When you have adjusted the carry-back year on

THE CINCINNATI ELBOW COMPANY

2617 Colerain Ave.

CINCINNATI 14, OHIO

ALL SIZES
ALL ANGLES
ALL GAUGES
ALL METALS

See Your Jobber

CONDUCTOR PIPE ELBOWS and SHOES

MEYER
SHEET METAL MACHINERY CO.

LARGEST in the WEST

REPRESENTING

Acme Electric Welder Co.	Electric Spot Welders
Benchmaster Manufacturing Co.	Bench Presses; Automatic Feeds
Bertsch & Company	Squaring and Gap Shears; Plate Bending Rolls
Beverly Shear Manuf. Co.	Throatless Shears
Clearing Machine Corp.	Mechanical Presses & Hydraulic Presses
Dahlstrom Machine Works	Multiple Roll-forming machines; Gang-Slitters
Dreis & Krump Manuf. Co.	"Chicago" Hand and Power Brakes; "Chicago" Power Press Brakes; Press Brake Dies
E. O. Grabo Machine Works	Metal Spinning Lathes
Johnson Machine & Press Corp.	Open Back Inclinable Presses
Libert Machine Company	Sheet Metal Shears; Circle Cutters
The Lockformer Company	Pittsburgh Lock-Forming Machines; Easy Edgers
The Peck, Stow & Wilcox Co.	"Pexto" Tinner's Hand and Power Machinery; Power Squaring Shears; Foot Shears
Rotex Punch Company	Turret Punches
San Angelo Foundry & Machine Co.	"Lowe" Slip-Roll Forming Machines
The V & O Press Company	Notching Presses; Dial Feeds; Roll Feeds; Open Back Inclinable Presses
The Van Dorn Electric Tool Co.	Portable Electric Shears, Drills, Grinders; Sanders
Whitney Metal Tool Company	Portable Punches, Shears, Benders and Notchers for Angles; Kick Presses; Deep Throat Power Presses

Write for Catalog

Meyer Sheet Metal Machinery Company

1928 SANTA FE AVE., LOS ANGELES 21, CALIF.

PIPE AND FITTINGS GUARANTEED QUALITY!

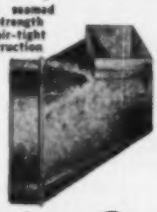
Scientifically designed to reduce air friction

All Ajax fittings are made of high-grade, full gauge sheets . . . no seconds used! Quality is fully guaranteed. Your order, large or small, receives prompt, personal attention.

For help on your heating problems our engineering department is at your service. Contact us . . . we'll gladly work with you.

Write for catalog of Furnace Fittings.

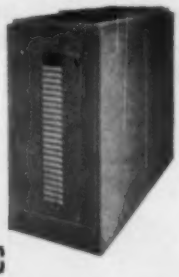
Double seamed for strength and air-tight construction



Ajax Furnace Fitting Co.
Division of
The Cincinnati Sheet Metal & Roofing Co.
216-20 E. FRONT ST. CINCINNATI, OHIO

Send for SPEC. #59-B

for the profit possibilities of GENERAL AUTOMATIC



WARM AIR CONDITIONERS

- *LOW BOYS—85,000 to 200,000 B.T.U.*
- *HIGH BOY—85,000 B.T.U.*

A FEW GOOD TERRITORIES STILL OPEN!

GENERAL Automatic Est. 1924 *Write Today*

GENERAL AUTOMATIC PRODUCTS CORPORATION
Formerly General Oil Burner Corporation
2300 Sinclair Lane, Baltimore 13, Md.

H&C Kwik-way DAMPER

THE FINEST SETS . . . and MOST INEXPENSIVE, INSTALLED!

One hammer-blow is all that is necessary to solidly fasten the bearing to the damper. No anvil is required. Identical bearings with retractable bolt make easier installation of both regular and splitter dampers in round and square ducts. The time these sets save plus the fact they are complete — with handle — makes them by far the most economical of all sets when installed cost is considered. See your jobber or write us for literature.

LIST PRICES

FOR MEDIUM DAMPERS		FOR LARGE DAMPERS	
No. 70 Set	30c	No. 30½ Set	60c
No. 77 Set	40c	No. 80½ Set	60c

HART & COOLEY MANUFACTURING CO.
500 EIGHTH ST. HOLLAND, MICH.
In Canada: Hart & Cooley Mfg. Co., Fort Erie, N. Ontario

TIME SAVER on EVERY Sheet Metal Pipe Assembly

Rolled-Rite STEEL *Angle Rings*

Here's a sure short cut to snug-fitting sheet metal pipe joints in *Heating, Ventilating, Fume Disposal, Dust Collecting* or *Air Conditioning* Systems.

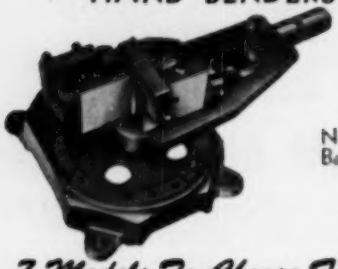
Accurately rolled to a true circle, Rolled-Rite Steel Angle Rings are available in 6" to 36" diameters—larger sizes rolled to your specifications.

Write at once for FREE list of sizes and price sheet.

CHICAGO METAL MFG. CO.
3733 South Rockwell Avenue Chicago 32, Illinois

JK OFFERS

A COMPLETE LINE OF HAND BENDERS



No. 4 JK Bar Bender

7 Models To Choose From!

There are JK benders for bending Angle — U — Bar — Eye and Awning Frames.

Send Today For Illustrated Catalog

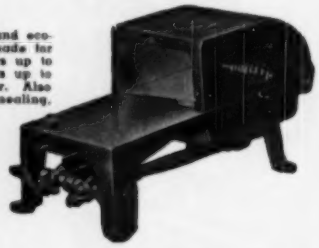
The JAMES KNIGHTS Company
SANDWICH, ILLINOIS

JOHNSON BENCH FURNACES

Highest temperature without forced air blast

No. 101

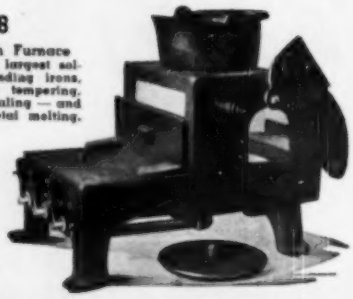
Most powerful, efficient and economical bench furnace made for heating, soldering coppers up to 12 lbs. per pair. Delivers up to 1800°F. without a blower. Also used for heat treating, annealing, and case hardening carbon steels. Firebox 3¾ x 4½ x 5½. Complete with work rest block and baffle plate.



No. 118

Combination Bench Furnace

Excellent for heating largest soldering coppers, branding irons, stenciling irons, for tempering, case hardening, annealing — and for soft-pipe and metal melting. Lid on hood may be removed and 22 lb. capacity melting pot inserted. A most efficient, economical and powerful furnace.



Write for Details
Catalog Free

JOHNSON GAS APPLIANCE CO.
580 E. AVENUE N.W. • CEDAR RAPIDS, IOWA

which you are figuring (1948 or 1947), you'll find that you have a higher net profit than you originally had for income tax purposes. See how much you have increased the net profit. Then the resulting *increase* is deducted from the net loss you had in 1949. If you still have any net loss left for 1949, then you're certain to get back some tax money.

If you had an extremely bad year, and there is still a loss figure left, then you apply it to another carry-back year. Take the oldest year first. In other words, figure first on 1947. Then, after you have wiped out the 1947 profit—provided your loss in 1949 was that high—the next step is to refigure 1948.

SMCNA Code

(From page 118)

(Alternate 2)

The heat loss of the structure, the selection of the furnace; the blower size; the size of the supply and return pipes or ducts; the area and construction of the ceiling "panels"; the construction details, shall be in accordance with the provisions of the latest edition of Manual No. 7-A, "Code and Manual for the Design and Installation of Warm Air Ceiling Panel Systems" and of Manual No. 3, "Measuring Heat Losses," both of the National Warm Air Heating & Air Conditioning Association.

(Alternate 3)

Note—When the above two alternates are not per-

SUBSTANTIAL PROFITS *for* YOU—

Cleaning Furnaces with the GRAND RAPIDS *De Luxe* FURNACE CLEANER

You can put furnace cleaning on a money making basis by using a Grand Rapids Furnace Cleaner. High velocity suction scoops up all deposits of soot, ashes and carbon, cleaning the heating plant and re-establishing full efficiency. Special attachments clean flues, radiators, right angle turns and other hard-to-reach areas. The job is done quickly and completely. Customers are highly satisfied.

The Grand Rapids DeLuxe Furnace Cleaner is also your "in" for more than cleaning profits. By checking over and inspecting the heating plant as you clean it you are in a position to make timely recommendations for new equipment or repairs. This means better service for customers . . . more profits for you.

See Doyle at Booth 271, Southwest Air Conditioning Exposition, Dallas, Texas, January 23-27, 1950

DOYLE VACUUM CLEANER CO.
227 Stevens St., S.W. Grand Rapids 7, Michigan

FLORITE Direct-Reading AIR VELOCITY METER

8" SCALE—Widest Scale of Any Mechanical Air Velocity Meter!

The FloRite is an unsurpassed sales and service aid in heating, ventilating and air conditioning work. On installation and service work it is used to determine velocity and direction of air flow from registers and grilles for the purpose of checking rate of air delivery, balancing the system and adjusting deflecting vanes and louvers of registers so as to obtain "draft free" air distribution. These tests cut installation and service time, prevent expensive call-backs, and promote customer goodwill. The FloRite is equally helpful for selling new equipment or modernization. It can be used in many ways to convincingly demonstrate discomforts and inefficiencies of a worn-out or inadequate system.

The FloRite is entirely self-contained. It has no hose or probe, and gives all readings required for heating, ventilating and air conditioning work. The detachable handle facilitates use of the FloRite at low wall or high side wall registers. By screwing a ½" pipe into the handle the FloRite can be conveniently held against ceiling grille.

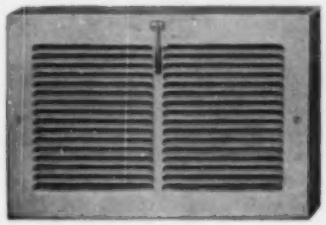
The FloRite is equipped with a unique scale lock which makes it possible to retain the reading until the lock is released. For ceiling grille readings, this lock is easily manipulated by means of a piece of string. This feature makes the FloRite exceptionally adaptable for indicating air velocity in hard-to-reach or dimly lit locations.

COMPLETE, in leather case . . . $32.00
LIST F.O.B. PGH.

Ask your jobber for the FloRite or write for Leaflet 739.

BACHARACH INDUSTRIAL INSTRUMENT CO.
7000 BENNETT STREET • • PITTSBURGH 8, PA.

SAVE TIME
By Using →



AND WATCH YOUR PROFITS INCREASE

Here's a single valve register with adjustable fins that combines quality and economy. See how you can save on air conditioning and gravity base registers. Ask your supplier or write.

THE A & A REGISTER CO.
8327 Clinton Rd. Cleveland, Ohio
Geo. G. Auer, Pres.

ACCURATE REVOLVING VENTILATORS

Natural draft is never hindered because the mouth of ventilator is full sized.

IDEAL FOR—
POULTRY HOUSES, DAIRIES, SCHOOLS, FACTORIES, and HOMES.

No finer ventilator can be bought at any price. Proven certified rate. Positively prevents down draft. Storm and rain proof.

Simple, sturdy, accurate and dependable and — LOW PRICED. SIZES 3" to 36"

Easy to Install and Provides Economical Ventilation.

Be wise—get a few sizes NOW, for your late chimney top job. For immediate delivery order from your jobber now. Send for latest prices.

Jobbers—Send for our Jobbers Set-Up!

Accurate Sheet Metal & Manufacturing Works
2336-40 Milwaukee Ave. Chicago 47, Ill.

LOOK! INSIDE
BEFORE YOU DECIDE

. . . and You Will Look to Radiation

★ MORE HEAT EFFICIENCY

★ MORE FOR YOUR HEATING DOLLAR

Styled in attractive cabinets for nearly every size home.

"Performance alone sells a Radiation Furnace."

DEALERS:
Write at once and learn why Radiation is the most outstanding buy today. Attractive territories for dealers and manufacturers agents.

Today's Most Outstanding Furnace

RADIATION FURNACE CORPORATION
Benton Harbor, Michigan

missible under local or state laws, the entire text, tables, details, etc., of Manuals No. 7-A and 3 should be incorporated in full in the Ordinance.

ARTICLE XII
Oil Burners and Oil Burner Equipment

Section 42—The term "oil burner," when used in this Ordinance, shall be construed to mean any device, for use in connection with a heating system, designed to burn fuel oil having a flash point of 100 F, or higher, as determined by the Tag Closed Tester in accordance with the method of test adopted by the American Society for Testing Materials (A.S.T.M. Designation D56-21) and having a fuel tank or container with a capacity of more than ten gallons connected thereto. The term "oil burner equipment" shall include oil burners, as defined above, and all tanks, piping, pumps, control devices and accessories used in connection therewith.

This Ordinance shall not apply to portable burners not requiring connection to a flue, such as oil stoves, oil heaters and oil lamps equipped with a wick or a mechanical device the movement of which is essential to flame adjustment.

Section 43—(Alternate 1)

The approval of oil burners, fuel oil, use of non-automatic burners, gravity feed to oil burners, pressure tanks, underground tanks, tanks inside buildings, tank construction, tank vents, tank fill and overflow pipes, gauges, pumps, piping, valves, heating oil, tests of tank

WANTED!!
—DISTRIBUTORS—
For the
NORWALKER
Commercial Direct Fired
Forced Warm Air Units
Closed Franchise Territories to
Established Wholesale Distributors
Unit Sizes–325,000
450,000, 600,000, 750,000 and
1,000,000 B. T. U's
Write for Particulars
The Norwalk Airconditioning Corp.
Makers of Fine Heating Equipment
138 Water St. So. Norwalk, Conn.

FIRST furnace blower made commercially in the Middle West. . . . TWENTY years of service in thousands of homes . . . continuing demand is PROOF of PREFERENCE for QUIETER operation.

It's the operation that counts in a blower. Rugged operation that's "Quiet as a Cat's Purr" and long life are assured when you install the UNIPACK.

AMERICAN MACHINE PRODUCTS CO.
MARSHALLTOWN, IOWA

Fittings that Fit!

Pipe-Elbows & Fittings
Made by

CRAFTSMEN

Write for
FREE CATALOG
Address
CRAFTSMEN IN SHEET METAL
EISBACH, INC.
755 Central Ave.
Dubuque, Iowa

ALBERT N. EISBACH
CRAFTSMEN IN SHEET METAL

FURNACES

to
Fill Your Warm Air Needs

Armstrong
Luxaire
ModernAire

All Three Designed to Give You

Style
Price
Performance

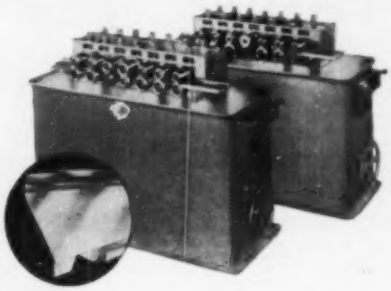
write today to

Iowa's Largest Heating Wholesaler

DES MOINES FURNACE & STOVE REPAIR CO.
Des Moines, Iowa

COMPLETE IN ONE PASS!

—formed shapes of any design—



You merely feed the flat strip into the machine—out comes the finished shape.

- Production speeds up to 250 f.p.m.
- Machine shipped completely tooled.
- No experience required to operate.

Sketch or sample will bring prompt proposal

Dahlstrom Machine Works, Inc.
4974 N. Elston Ave. Chicago 30, Ill.

Roll Forming, Slitting, Straightening, and Cut-Off Machines

BIG PROFITS during Winter Months

CIRCULATAIRE BOOSTER FAN ELIMINATES COLD ROOMS, BALANCES HEAT DISTRIBUTION

No slump in winter months for CIRCULATAIRE dealers. The CIRCULATAIRE can be easily and quickly installed on the coldest day in winter with practically no inconvenience to the home-owner. Get your share of the big profits all through the cold weather installing CIRCULATAIRES when they're *most needed* and *easiest sold*. Easily and Quickly Installed without removing bonnet. Rigid—Quiet—Efficient.

NOW READY —*New CIRCULATAIRE Sales Aids add effectiveness to selling interview, conserves valuable selling time and increases sales.*

A COMPLETELY PACKAGED UNIT
Nothing for the dealer to furnish except limited amount of labor.

GET THE FACTS TODAY! WRITE...
CIRCULATAIRE DIVISION OF CORLETT-TURNER CO.
1001 S. KOSTNER AVE., CHICAGO 24

PENN-AIRE FURNACES

Winter Air Conditioning and Gravity

CAST IRON, COAL FIRED

Popular Price Practical Design

Economical Operation

UNION MANUFACTURING CO. INC.

Boyertown, Pa.

coverings, burner controls, modifications, fireproofing, and all other installation details shall conform with the specifications set forth in Pamphlet No. 21, edition of 1947, "Installation of Oil Burning Equipments," of the National Board of Fire Underwriters.

(Alternate 2)

The approval of oil burners, fuel oil, use of non-automatic burners, gravity feed to oil burners, pressure tanks, underground tanks, tanks inside buildings, tank construction, tank vents, tank fill and overflow pipes, gauges, pumps, piping, valves, heating oil, tests of tank coverings, burner controls, modifications, fireproofing, and all other installation details shall conform with the specifications set forth in the latest edition of Pamphlet No. 31, "Installation of Oil Burning Equipment" of the National Board of Fire Underwriters.

(Alternate 3)

Where the above two alternates are not permissible under local or state laws, the entire text of suitable sections of Pamphlet No. 31, "Installation of Oil Burning Equipments," of the National Board of Fire Underwriters, should be incorporated in full in the Ordinance.

ARTICLE XIII

Stokers and Stoker Fired Heating Systems

Section 44—The term "stoker" shall, for the purpose of this Ordinance, be taken to mean a mechanical device for feeding solid fuel into the combustion chamber used in connection with a heating plant, whether automatically or manually controlled.

Section 45—Stokers which are not equipped with automatic means of preventing excessive pressures or

Quality stands the test!

It pays to buy a

KENT

DOUBLE SUCTION FURNACE CLEANER

- Dust bag is inside the can—less chance of tearing
- Separates into 2 parts—easy to carry
- Low center of gravity—prevents tipping

The sturdy, reliable KENT gives you long life with fewer breakdowns . . . you can depend on Kent quality, design, and workmanship to do the job when you want it done. Compare KENT before you buy any Furnace Cleaner!

CLEAN WITH KENT EQUIPMENT

The KENT Company • 433 Canal Street • Rome, New York

THE PROOF'S In the USE

RUBYFLUID FLUX

One trial of Rubyfluid paste or liquid flux will convince you that you get stronger, neater, longer lasting soldering jobs than you have ever had before. Rubyfluid acts faster, saves time, speeds production. There are no harmful or objectionable fumes to affect the operator, his clothes or tools. Rubyfluid Flux makes solder flow in a thin film—gives a better appearing joint and saves solder.

Ruby's Stainless Steel Flux is a special formula approved by the makers of stainless steel—it does not stain or corrode the metal and its use does not require excessive heat or extra equipment.

For a BETTER JOB—always use RUBYFLUID FLUX

Rubyfluid is packaged in sizes to fit every need—paste in 2, 4, 6, 8 and 16 ounce cans—liquid in sizes from 3 ounces to 55 gallon drums.

RUBY CHEMICAL CO.

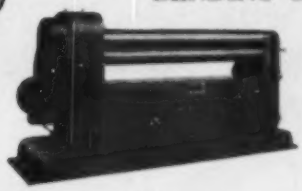
74 McDowell St., Columbus 8, Ohio

Rubyfluid

ALL STEEL **REED** BENDING ROLLS

BUILT IN THESE POPULAR SIZES:

Series 400 4¼" Rolls Model	Capacity	Series 500 5" Rolls Model	Capacity	Series 600 6" Rolls Model	Capacity
438	36" x 10 GA.	503	36" x 7 GA.	603	36" x 3/8"
444	42" x 11 GA.	504	48" x 8 GA.	604	48" x 5/16"
450	48" x 12 GA.	505	60" x 10 GA.	605	60" x ¼"
462	60" x 14 GA.	506	72" x 12 GA.	606	72" x 3/16"
474	72" x 16 GA.	508	96" x 16 GA.	608	96" x 10 GA.



- ALL STEEL
- COMPACT
- ANTI-TORQUE FRAME
- SILENT WORM GEAR DRIVE
- BRONZE BEARINGS

PROMPT DELIVERY — SOME SIZES FROM STOCK

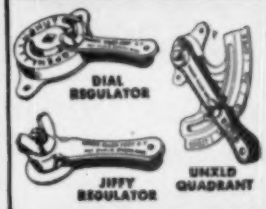
REED ENGINEERING COMPANY CARTHAGE, MISSOURI, U.S.A.

HEAT THAT COLD ROOM

This self-cooled booster fan will do the job better because it's ventilated. Oil only twice a year without removing the fan from warm air pipe. Long lasting, quiet, efficient, runs on house current, weighs only 1½ lbs. Fits pipe sizes from 8" to 12", very simple to install. Can be operated with switch, automatic fan control or thermostat. Thousands now in use. Ask your jobber today or write us for prices. Insist on McLarty, the only ventilated booster fan on the market.

McLARTY SYSTEMS 201 W. Mich. Ave. Battle Creek, Mich.

A Type and Size for Every Need



For efficiently controlling light and medium dampers in heating, ventilating and air conditioning systems, specify Parker-Kalon Damper Controls. The line includes all types and sizes, at a range of prices to fit the needs of any job. Parker-Kalon Corp., 200 Varick Street, New York.

PARKER-KALON damper controls

New Ammunition FOR *SUREFIRE* FURNACE SALES IN 1950

See Page 55

Phone 4-1812 — Phone 4-5639

GRANT TOTTEN COMPANY

HEATING AND SHEET METAL SUPPLIES

EVERYTHING FOR THE SHEET METAL MAN

All Contracts Subject to Strikes and Accidents

1215-19 McKinley Avenue, S.W. - Canton 4, O.

classified advertising . . .

Is the quick, economical way to find what you're looking for. Check the classified page each and every issue for real bargains and hard to find items. It's a quick and sensible means too, of disposing of tools, equipment, and anything else for which you no longer have use. Check the classified page for rates.

SPOT WELD WITH ACME "HOT SPOT" WELDERS

- Years of care-free service in thousands of sheet metal fabricating plants throughout the world.

LIFETIME GUARANTEE!

Complete range of sizes. Write for literature and prices.

ACME ELECTRIC WELDER CO.
2618-B Fruitland Road Los Angeles 11, Calif.

THEY REALLY FIT and ADJUST

SUPERIOR PRODUCTS CO.

MFGRS. OF SUPERIOR PIPE, ELBOWS AND FITTINGS
DISTRIBUTORS OF HEATING SUPPLIES

606-10 So. 14th St.

Omaha 2, Nebraska

temperatures of the heating medium shall not be installed or operated in any location where a competent attendant will not constantly be on duty on the premises while the stoker is in operation.

Section 46—Except as provided in Section 45 of this Ordinance, each mechanical stoker shall be equipped with at least one (1) high limit control so connected as to shut off power from the stoker drive in the event of excessive pressure or temperature in the heating system. Each steam or vapor boiler shall be equipped with a low water cut-off.

Section 47—(Alternate 1)

The approval of coal stokers, their installation, controls, etc., shall conform with the specifications of the "Technical Manual," Second edition, 1947, of the Stoker Manufacturers Association.

(Alternate 2)

The approval of coal stokers, their installation, controls, etc., shall conform with the specifications of the latest edition of the "Technical Manual" of the Stoker Manufacturers Association.

(Alternate 3)

Note—Where the above two alternates are not permissible under local or state laws, the entire text of suitable sections of the "Technical Manual" of the Stoker Manufacturers Association should be incorporated in full in the Ordinance.

ARTICLE XIV

Gas Burners and Gas Heating Appliances

Section 50—The term "gas burners and gas burning appliances," when used in this Ordinance, shall be

ONE SUPPLY SOURCE FOR

Quick Service Since 1882

REPAIRS FOR Any FURNACE - BOILER - STOVE - STOKER OR OIL BURNER

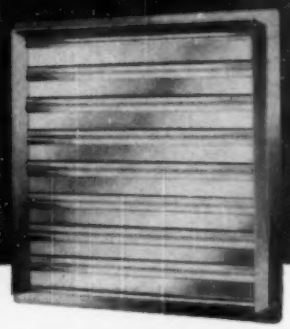
Sell Repairs Increase Your Profits

Consumer demand for repair jobs is increasing and this means more profitable business for you. You can complete all your repair jobs more quickly, at less cost and with greater profit when you order all your replacement parts for furnaces, boilers, stokers, oil burners and stoves from the OMAHA STOVE REPAIR WORKS. Complete stocks of repair parts make it possible for us to fill 98% of all orders the day they are received which prevents job delay and pleases your customers. We are also set-up to give quick service on new Waterman-Waterbury furnaces, blowers, fittings, registers, incinerators, water heaters and all types accessories and sundry items.

OMAHA STOVE REPAIR WORKS

1206 Douglas Street — Omaha 2, Nebraska

they all want **AIR-FLO**



MODEL A-555

THE AUTOMATIC SHUTTER WITH ALL THE FEATURES

Front View—Closed

IT TAKES THE LOAD OFF THE FAN!

Aluminum louvers open fully, permitting capacity fan operation. New heavy reinforcement strip adds strength and long life to the louvers, assures quiet operation and perfect counterbalance, prevents rattling. Deep shroud protects shutter from high winds. Tie-rod, brackets and bearings inside frame, not exposed to weather. Special finish resists corrosion. Many other features.

Write for New Air-Flo Catalog 43-C

Illustrations and details of the complete Air-Flo line.

AIR CONDITIONING PRODUCTS CO.

2340 W. LAFAYETTE BLVD. · DETROIT 16, MICH.

THE ORIGINAL ECONOMY FOOT POWER SHEAR

Capacity 36 to 52 inches. 18 ga. and lighter.

All steel welded construction, capacity to 18 ga. soft steel. Top knife bar strongly braced and provided with adjustable bronze gibs to compensate for wear. Blades of highest grade tool steel tempered and carefully ground to give maximum service before regrinding. Adjustable front and rear gauges, quickly set for different sizes. Spring actuated hold-down will clamp material firmly to the bed.

To Cut Material 36" Wide $225.00
To Cut Material 42" Wide $300.00
To Cut Material 52" Wide $375.00

ACME EQUIPMENT CO. INC.

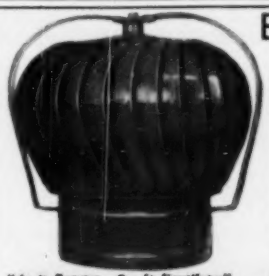
All prices F.O.B. Chicago—Prompt Shipment

The New Economy 8' 16 gauge Hand Bending Brake Now Available for Prompt Shipment

Exclusive Distributors

126-128 So. CLINTON ST., CHICAGO 6, ILL.

Phone ANDover 3430



EMPIRE PRODUCTS

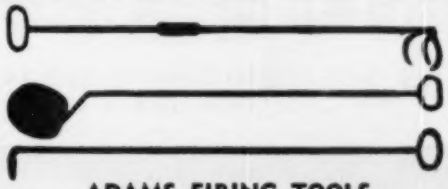
INCLUDE

TURBINE VENTILATORS
SYPHON VENTILATORS
SINGLE CONE VENTS
VENTILATOR BASES
DRAFT REGULATORS
STATIONARY LOUVERS
AUTOMATIC SHUTTERS

"As it Rotates ● It Ventilates" *Write for Free Catalog Today*

Empire Ventilation Equipment Co.

35-39 VERNON BOULEVARD LONG ISLAND CITY 6, N. Y.



ADAMS FIRING TOOLS

CLINKER TONGS — FURNACE POKERS
ASH REMOVERS — FIRE RAKES
FIRING HOES

Buy Adams Known Quality

THE ADAMS COMPANY

BRIDGE STREET DUBUQUE, IOWA

PROMPT SHIPMENT

ANGLE RINGS

ON THE SQUARE

We specialize in rolling to your specific requirements angles, channels, tees, bars and special shapes.
Our skilled and experienced workmen have the knack of turning out rings with perfect curvature—furnished with or without bolt holes.

Write today for standard sizes and discounts

National Metal Fabricators

2140 So. Sawyer Avenue Chicago 23, Illinois

FOR MORE *Profits* SELL

ATH-A-NOR

Your profits are higher because Ath-A-Nor costs you less to buy, less to service. Here is the lowest priced brand name, quality furnace in America today and the only furnace in the world with the famous Ath-A-Nor Air Blast. Write for dealer information.

Coal Gas & Oil Furnaces & Parts

MAY-FIEBEGER COMPANY

MANUFACTURERS OF QUALITY HEATING EQUIPMENT FOR OVER 50 YEARS

Newark Ohio

WHITNEY METAL
TOOL COMPANY
39 YEARS EXPERIENCE

WHITNEY-JENSEN
No. 52 BENDER

An easily operated, ruggedly built bender that always produces good square bends in round solid bars, flats, and angles. Patented adjustment compensates for thickness of metal. An adjustable gauge — for duplicating bends — is provided.

Capacity — mild steel —
1/2" rounds, 1/4" x 2" flats, 1/4" x 2" angles

Other Whitney Benders also available

WHITNEY METAL TOOL COMPANY
91 FORBES STREET, ROCKFORD, ILLINOIS

construed to mean a device for the final conveyance of the gas, or a mixture of gas and air, to the combustion zone of a furnace, boiler, device or appliance used in connection with a heating system and shall include conversion burners and gas burning equipment as hereinafter defined.

The term "gas burning equipment" shall include gas burners, as above defined, and all piping (other than supply piping from meter to appliance shutoff valve) fans, blowers, control devices and accessories connected to the burners.

Section 51—(Alternate 1)

The requirements for installation of domestic gas conversion burners and gas burning appliances, including the inspection of the heating plant, approval of the gas unit, piping, checking, adjustment, testing of the burner and controls, etc., shall conform to the specifications set forth in the manual—ASA Z 21.8-1948, UDC 662.95—"Requirements for Installation of Domestic Gas Conversion Burners of the American Standards Association and the American Gas Association, edition of 1948.

(Alternate 2)

The requirements for installation of domestic gas conversion burners and gas burning appliances, including the inspection of the heating plant, approval of the gas unit, piping, checking, adjustment, testing of the burner and controls, etc., shall conform to the specifications set forth in the latest edition of the Manual—ASA,Z21.8, UDC 662.95—"Requirements for Installation of Domestic Gas Conversion Burners" of the American

Western Rotary Ventilators provide greater, more constant exhaust than any stationary devices. Powerful, quiet, always dependable, Western Rotary Ventilators present the clean, low silhouette that modern commercial and industrial structures demand.

Send for Complete Western Catalog

Up-to-the-minute information, sizes, capacities, price lists on Western's full line of ventilating equipment, stocked in most major cities. In 1950 SWEET'S and A.E.C.

"Always on the job — Never on the payroll."

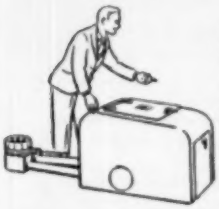
JOBBERS: Participate in our national distribution system. Details on request.

WESTERN ENGINEERING & MFG. CO.
1726-28 E. WASHINGTON BLVD., LOS ANGELES 21, CALIF.

Now that you have a wide selection...

Make greater NET profits by selling the stoker which

- is recognized for highest quality (sells fast)
- requires minimum call-backs (saves you money)
- gives complete satisfaction (helps you sell others)



12 SIZES — for homes, apartments, schools, greenhouses, garages, etc. — 30 to 1250 lbs. per hour.

WRITE, WIRE, OR PHONE for details on this complete line of precision-built, highest quality stokers.

SELL LARGER SIZES TO HELP BOOST RENTS!

ECON-O-COL
The "Stronghearted" Stoker
BUILT BY COTTA TRANSMISSION COMPANY • ROCKFORD, ILLINOIS

MANUFACTURERS OF

FURNACE PIPE AND FITTINGS,

Prefabricated Ducts,

also conductor pipe, eaves trough, drip edge, rake strip, etc.

THOR METAL PRODUCTS CO., INC.

Box 118 Eastwood Station — Syracuse, N. Y.

Sheet Metal Machinery

Pittsburgh Lock Machines

Stovepipe and Elbow Machines

Roll Forming Machinery and Dies

Maplewood Machinery Co.

2634 Fullerton Avenue
Chicago, Ill.

UNDERWRITERS' APPROVED

SHALLO-WELL

OIL-FIRED FLOOR FURNACES ONLY **34** INCHES DEEP

BTU CAPACITIES OF
• 50,000 • 65,000 • 75,000

Write for Details!

ORAN

ORAN COMPANY
2222 S. THIRD STREET
COLUMBUS 7, OHIO

VERNOIS

REPAIR PARTS

Using original Vernois parts assures your customer of a perfect, tight repair job which will prolong the life and increase the efficiency of his Vernois furnace. Inferior repairs means an inferior job—install original Vernois parts and be sure!

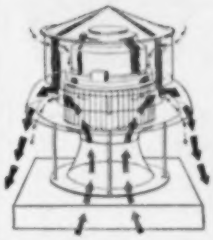
MT. VERNON FURNACE & MFG. CO.
MT. VERNON, ILLINOIS

WANT

New Ammunition

FOR

1950 FURNACE SELLING?



NEW

GALLAHER Air-Van POWER EXHAUSTER

- Motor out of Air Stream
- Completely Weatherproof
- Direct connected, positive acting squirrel-cage fan
- Capacities, 100 -12,000 CFM

For full information contact your Gallaher representative.

The GALLAHER Company
Omaha, Nebr. — Owatonna, Minn.

BLOW-PIPE PARTS

One-piece pressed Elbows, from 3-inch to 14-inch diameter, of 22- to 18-gauge metal, also Blast Gates, or Cut-offs. Ball Joints, Adjustable Hoods, Rolled and Pressed Steel Rings and other Blow-Pipe Parts made at low cost by production methods. Write for literature and prices.

KIRK & BLUM
2880 SPRING GROVE AVE. — CINCINNATI 25, OHIO

IMPROVED!

• BB •

No. 12 SHANK

33⅓% STRONGER

IMPROVEMENT IS APPLIED TO No. 15—SQUARE, No. 18—¼ PITCH, AND No. 25—¼ PITCH.

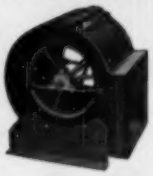
SOLD THRU LEADING JOBBERS EVERYWHERE

BERGER BROS. CO.
Main Office & Factory
229-237 Arch St., Philadelphia, Pa.

• BLOWERS •

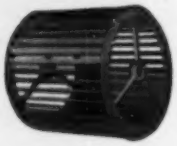
for

Air Conditioning Furnace Manufacturers



The *New* Bishop & Babcock Air Conditioning Blower Assembly Type "AC"—Design 2

The *New* Bishop & Babcock Blower Wheel For Air Conditioning Furnace Blowers



The *New* Bishop & Babcock All Stamped Housing Assembly and Component Parts

Write for Bulletin No. 115

MASSACHUSETTS BLOWER DIVISION

The **BISHOP & BABCOCK** *Mfg. Co.*

4701 HAMILTON AVENUE CLEVELAND 14, OHIO

HESS-SNYDER

COMPANY ... SINCE 1880

MANUFACTURERS OF

BOOMER and STARK

FURNACES FOR

GAS-	CAST IRON STEEL	GRAVITY FORCED AIR
OIL-	STEEL	FORCED AIR
COAL-	CAST IRON STEEL	GRAVITY FORCED AIR

Dealer Inquiries Invited

HESS-SNYDER CO., Massillon, O.

Standards Association and the American Gas Association.

(Alternate 3)

Where the above two alternates are not permissible under local or state laws, the entire text of suitable sections of the Manual "Requirements for Installation of Domestic Gas Conversion Burners" should be incorporated in full in the Ordinance.

ARTICLE XV
Reports of Delivery

Section 52—Every common or private carrier or person who shall deliver at any place within the area covered by this Ordinance for installation at such place, any equipment or article, whose installation for heating purposes is governed by the provisions of this Ordinance, excepting repair parts, shall make a report of such delivery to the building department, on blanks to be furnished by said department, within forty-eight hours after such delivery, showing the articles so delivered, place of delivery, and date thereof; any common or private carrier or person failing to make any such report shall be guilty of violation of this Ordinance, and shall, upon conviction thereof, be subject to a fine of not less than ..... dollars nor more than ..... dollars for the first offense, and for the second and any subsequent offense not less than ..... dollars nor more than ..... dollars.

ARTICLE XVI
Violations and Penalties

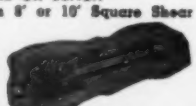
Section 53—Revocation of licenses for unlawfully

ALMAR EASY SLITTER

FOR USE WITH BRAKE OR BENCH

Speed up your work—without an 8' or 10' Square Shear

The Rotary action of cutters produces a neat, accurate clean edge.



PRICE—COMPLETE

Almar Easy Slitter

with cutting head & track

8' Brake Type	—	$80.00
8' Bench Type	—	$75.00
10' Brake Type	—	$85.00
10' Bench Type	—	$85.00

F.O.B.—Chicago, Ill.

WARD MACHINERY COMPANY

564 W. WASHINGTON BLVD. CHICAGO 6, ILLINOIS

NEW AMMUNITION

FOR TWO GUN SELLING OF 1950 FURNACE BUYERS

SEE PAGE 55

THOR GOVERNMENT CLIP DIES

SHEAR—PUNCH A 5/32" HOLE—MARK POINT AT BREAKLINE

ALL IN ONE OPERATION!

MODEL NO. 100 CAPACITY 22 GAUGE, $ 85.00
MODEL NO. 200 CAPACITY 18 GAUGE, $140.00

Prices F.O.B. Oakland, Calif.

These bench model hand-operated dies are designed to speed up work in all sheet metal shops doing heating and ventilating.

No waste of time in punch press set-up.

Dies can be taken along on outside jobs.

Long strips of metal can be passed through either of these dies and sheared to length.

See your local dealer or write for literature and samples of metal sheared in dies.

THOR TOOL AND DIE CO., 3444 Morrison Ave., Oakland 2, Calif.

Designed Primarily for Residential Heat Loss Calculations.

CLIMATEMAKER Heat Loss Calculating SLIDE RULE

Gives the RIGHT Answers QUICKLY to:

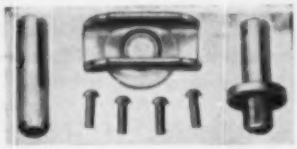
★ B.T.U. heat loss per room. ★ C.F.M. required per room.
★ Pipe area, pipe and stack size for forced or gravity warm air heating.
★ E.D.R. of steam and hot water.
★ Blower size.
★ Figures outside design temperatures from 40 Below to 40 Above zero. Designs based on zero to 70°.

Easy to learn—Simple to use.
ORDER NOW—Write Dept. AA-1

PRICE 75¢
Cash With Order
Copyrighted in U.S.A. and Canada

CLIMATEMAKER SLIDE RULE COMPANY, Not Inc.
1404 E. Washington St. Bloomington, Ill.

GOESE – *The Original Time Saver* DAMPER CONTROL



(Patented)

Can be used on either flat, square, or round pipes. Regular or splitter dampers.

USE GOESE FOR SAFETY!

GOESE MANUFACTURING COMPANY
2548 N. 18th Street Milwaukee 6, Wis.

Bigger Earnings For You

IT'S EASY!
IT'S SUPER!

Furnace cleaning with the Super Red Streak will bring you added income in 1950—more money two ways. You make a nice profit on the cleaning job. Cleaning reveals need for repairs and replacements before emergencies occur. Helps the consumer get more comfort. Cuts fuel bills. With a Super you can clean them hot or cold. Special new filter bag eliminates back pressure in cleaning oil burners.

Chimney cleaning, often necessary now, is done without danger to the operator or disturbance to the household. Try a Super 5 days free. You keep what you make.

National Super Service Company, Inc.
1944 N. 13th St., Toledo 2, Ohio
National Super Service Company of Canada
Toronto, Ont. Vancouver, B. C.

Heating Sheet Metal — FRANK X ENDERLE — **Air Conditioning Supplies**

Furnace pipe, adjustable elbows and Fittings

ALSO: Complete line sheet metal hand tools

Frank X Enderle, Inc., Ltd.

1600-1700 San Fernando Road, Los Angeles 41, Cal.

THE HANDY PACKAGE THAT SERVICEMEN PREFER

CLEAN SWEEP SOOT REMOVER

Speeds up Service Calls and Builds Customer Goodwill

For Coal, Gas, Vaporizing Rotary or Gun Oil Burners, Stoves, Furnaces and Boilers.

LOOK FOR THE BROOM ON THE PACKAGE

CLEAN SWEEP COMPANY
3045 Rolfe Road - Lansing, Michigan
ASK YOUR JOBBER OR WRITE US FOR DETAILS TODAY

Factory-New

BENDING BRAKES

(Dreis & Krump Co.'s)

LOCKFORMING MACHINES
POWER SQUARING SHEARS

and many other sheetmetal-working machines.

Immediate Delivery from Our Stock

MEHL MACHINERY
1101-03 Austin St. Houston 3, Texas

securing permits for others.

Any person duly licensed, as required by this Ordinance, to supervise or perform any installation of work governed by this Ordinance, who shall, as such licensee, take out or secure a permit such as is required by this Ordinance, for work to be done by any person not connected with such licensee nor in the employ of such licensed person, or who shall allow his name to be used by any other person for the purpose either of doing any such work or obtaining permit therefor, shall by such act, upon conviction thereof, forthwith forfeit his license, and the inspector of warm air heating work shall thereafter refuse to issue any further permits to construct, install, alter or repair any heating or air conditioning plant or equipment under any license so forfeited.

Penalties

Any person who shall install in any building, structure or enclosure in the area covered by this Ordinance any apparatus, articles or equipment for warm air heating, as defined in this Ordinance, which does not comply with the requirements of this Ordinance for warm air heating, shall be guilty of a violation of this Ordinance and shall be subject, on conviction thereof by any Court of Justice, of a fine of not less than ..... dollars nor more than ..... dollars for the first offense; and for the second and each subsequent offense not less than ..... dollars nor more than ..... dollars.

Any person including owners of, and agents for, real estate being improved by work governed by the provisions of this Ordinance, who shall violate any provision of this Ordinance or fail to comply with any of such provisions, except where a specific penalty is otherwise provided herein, shall be subject, on conviction thereof by any Court of Justice, to a fine of not less than ..... dollars nor more than ..... dollars for the first offense, and for the second offense not less than ..... dollars nor more than ..... dollars, and for any subsequent offense not less than ..... dollars nor more than ..... dollars; and in addition thereto any license theretofore issued to such offender may be revoked by the Board of Warm Air Heating on finding such licensee thus guilty; and where such violation is of a continuing nature, each day any such persons violate or fail to comply with any such provision of this Ordinance shall be deemed a separate offense.

ARTICLE XVII
Saving Clause

Section 54—All previous Ordinances, or portions of Ordinances, inconsistent with or in conflict with this Ordinance and all amendments thereto, are hereby repealed.

Section 55—Should any section, paragraph, or provision of this Ordinance be declared by the Courts to be invalid, the same shall not affect the validity of the Ordinance as a whole or any part thereof other than the part so declared invalid.

1876 — 1950

FEW AS GOOD — GILTEDGE — NONE BETTER

BLOWERS
CONTROLS
REGISTERS
PIPE
FITTINGS

FURNACES
ROUND AND SQUARE
CAST IRON AND STEEL
ANYTHING AND EVERYTHING FOR THE FURNACE MAN

GAS BURNERS
OIL BURNERS
GAS FURNACES
OIL FURNACES
STOKERS

All genuine Gilt Edge repairs carry a label saying "Genuine Gilt Edge Part." We have genuine Gilt Edge repairs—for all Gilt Edge Furnaces and Boilers

A few exclusive Gilt Edge territories open to dealers on Giltedge heating equipment

SCHWAB FURNACE CO.

332 WEST FLORIDA ST.
MILWAUKEE 4, WISCONSIN

ORIGINAL REPAIR PARTS
for
RUDY FURNACES
also
Repairs for other makes such as: PENINSULAR, JEWEL, LAUREL, GARLAND, MARSHALL, HOME, HOLLAND, KALAMAZOO, CALORIC, ETC.

Phone 5322 — Write — Wire

LIVINGSTON, INC., MARSHALL MICHIGAN

Your warm air heating supply house

ORNAMENTS

STAMPINGS & SPINNINGS

Zinc Ornaments Available From Stock. Copper, brass, bronze, aluminum and stainless steel ornaments made up promptly.

If you don't have catalog K, send for it NOW.

MILLER & DOING

68 YORK STREET — BROOKLYN, N. Y.

classified advertising . . .

Is the quick, economical way to find what you're looking for. Check the classified page each and every issue for real bargains and hard to find items. It's a quick and sensible means too, of disposing of tools, equipment, and anything else for which you no longer have use. Check the classified page for rates.

MILTON

SHEET METAL MACHINERY SPECIALISTS

ROLLS • SHEARS • BRAKES
PUNCHES • HAND TOOLS
NEW and USED
Immediate Delivery

MILTON EQUIPMENT CO.

404-08 RACE ST. PHILADELPHIA 6, PENNA.
WE BUY, SELL AND EXCHANGE

CLASSIFIED Advertising

Classified section: Rates for classified advertising are 8 cents for each word, including heading and address. One inch $4.00. Count seven words for keyed address. Minimum $2.00 for each insertion. Cash must accompany order.

for sale

FOR SALE: Warm air heating and sheet metal business, equipped with three light one-half ton trucks, a large vacuum furnace cleaner mounted on a ton truck, complete office equipment and a good set of books, forms, contracts, etc., new set of sheet metal tools, neon signs. All of the above equipment new and in first-class condition. We have exclusive lines of merchandise in our trade area and are highly regarded by our 4000+ users. Located in Colorado. Business established 5 years. Yearly volume between $150,000.00 and $200,000.00 Would have to be seen to be appreciated. Approximately $30,000.00 would buy equipment, inventory, goodwill and all. The name of Company would not have to be changed. Address Key #791, American Artisan, 6 No. Michigan Ave., Chicago 2.

TWO SHOPS in Montana, 100 miles apart. Will sell one. Fishing and hunting the Best and business Better. Write: V. K. Roberts, 113 East Main, Lewistown, Mont.

situation wanted

SALES ENGINEER seeks position where personality, experience and ability counts. Capable of selling, engineering and supervising installation. Not afraid to get hands dirty. Address Key #788, American Artisan, 6 No. Michigan Ave., Chicago 2.

situations open

Sheet Metal Superintendent, Estimator. Complete charge, shop and field, all phases, general sheet metal, heating, air conditioning, on State, School and home construction, shop jobbing, kitchen, bar work, etc. Aggressive, references. Age 34, family. California only. Address Key #803, American Artisan, 6 No. Michigan Ave., Chicago 2, Ill.

WANTED—Furnace Salesman. Furnace manufacturer which has sold many units in the state of Iowa and is well known in the area, has position available for an experienced salesman for that territory. A salesman acquainted with dealers and distributors in Iowa preferred. Our salesmen know of this position being available. Make written application, stating all qualifications, age, experience, etc., sending same to Key #804, American Artisan, 6 No. Michigan Avenue, Chicago 2, Ill.

Start The New Year Right!
Make plans now to buy
U. S. Savings Bonds Regularly

agents wanted

MANUFACTURERS' AGENTS! Check the full page advertisement in this issue of the entirely new concept in warm air heating—Brandes Wall Base Heat. This product is available to the right manufacturer's representative in each territory throughout the country. It will be a profitable line—well advertised to the trade. Write us immediately if interested. Brandes Company, 2046 Winnebago, Madison 4, Wisconsin.

wanted

WANTED: Machines for manufacturing furnace pipe and elbows. Give full information, lowest price. The Webster Company, 3017 So. Second Ave., Birmingham, Alabama.

WANTED—Shearings any amount—all sizes. Galvanized, cold and hot rolled aluminum. Stainless and copper 6" minimum width to 36" minimum length, uniform quantities. Gauges from 16 to 30 inclusive.

Write or wire
Los Angeles Sheet Metal Mfg. Co.
901-903 East 9th Street
Los Angeles 21, Calif.
Trinity 4713

SERVICE SECTION — also see page 274 ▶ ▶ ▶

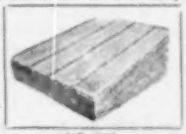
ALL STYLES SKYLIGHTS ALL SIZES

WILLIS SKYLIGHTS are designed to give a maximum of light with perfect ventilation. Constant improvement for over forty years, guarantees WILLIS customers greater value, both in construction and workmanship.

Willis skylights are constructed with condensation gutters on all bars and at the eaves to carry away the moisture. They are water-tight without the use of putty and are easily installed on old or new buildings.

Our engineering department will be glad to assist you in your skylight problems.

NO. 705



NO. 505

SEND FOR CATALOG

WILLIS STEEL CORPORATION - - Galesburg, Illinois

Established in 1891

GRAND RAPIDS FURNACE CLEANERS

Write for Details
DOYLE VACUUM CLEANER CO.
227 Stevens St., S.W.
Grand Rapids 7, Mich.

THESE PAGES PRESENT AN OPPORTUNITY TO GET THE MOST FOR YOUR ADVERTISING DOLLAR. USE FREQUENTLY IN 1950.

Perfect uniform Crimps on Light or Heavy Smoke and Conductor Pipes. Saves Carrying Heavy Machine on Job.

DO-MOR

Adjustable Saw Handle

- Fast Non-Slip Adjustment to Various Sawing Positions
- Comfortable Hand Grip of Polished Aluminum Alloy
- Fits All Keyhole Saw Blades. Fully Guaranteed

Either Tool only $1.95 each—
If your jobber can't supply, write.

PIONEER TOOL CO.
1103 Wisconsin Ave., Racine, Wisconsin

A TIME SAVER
CHAMPION DRAW ACTION PIPE CRIMPER
Length—14 Inches, Weight—one lb. 10 oz.
Crimps plain round, square and rectangular pipe—quickly, perfectly and easily. Can be used in the shop or carried conveniently in the tool kit to outside jobs. Appreciated by those who install warm air furnace pipe, wall stacks, air ducts, smoke, conductor and water heater vent pipe, etc. Price $3.50 f.o.b. Factory. A tool of real merit, in fact "it's clever."
Jobbers and Installers:
Write for full details today
CHAMPION TOOL COMPANY
4361 S. Broadway, Los Angeles 37, Calif.

IF YOU DO BRAKE WORK

FOR STORE FRONTS
we can supply
ALUMILITED ALUMINUM
Flat—Ribbed—Corrugated
WRITE FOR CIRCULAR
Philadelphia Rust-Proof Co.
3225 Frankford Ave., Phila. 34, Pa.

Cut Soldering Costs in Half

- Will give you hot soldering irons in one minute
- Solders eight hours for 10c
- Right amount of heat
- No changing of irons
- Make your own fuel from water and carbide

REINER & CAMPBELL CO., INC.
667 Norwood Terrace, Elizabeth, New Jersey

AMERICAN ARTISAN
SERVICE SECTION

Service Section: Rates for display space in the Service Section are $8.50 per inch per insertion. One-inch minimum space accepted.

TOOLS for the ROOFING CONTRACTOR

AXES
BEAMS
BRACKETS
BROOMS
BUCKETS
CALKING GUNS
CALKING CEMENT
DIPPERS
HATCHETS
HOISTS—PORTABLE
HOISTING WHEELS
HOOKS
INSULBRIC CUTTERS
KETTLES
KNIVES
LADDERS
LADDER JACKS
KNOT BRUSHES
MOPS: JEWEL, FREY PATENT, CABLE CORD, SOFT YARN, GLASS
MOP BELLS
MOP HANDLES
NAILS, CONCRETE
ROPE
SCRAPERS
SLATERS' TOOLS
TROWELS
WHEELBARROWS

FRANK P. FREY & CO.
2634 W. MADISON STREET CHICAGO 12, ILLINOIS

PORTABLE METAL BRAKES

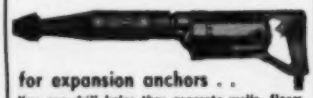
Well balanced, easily operated sturdy construction. Equipped with two screw type clamps to afford easy bench mounting, also two other styles—literature on request.

DEALERS WANTED
F.O.B. DETROIT—No C.O.D.'S

10" BRAKE only $10.00 Capacity 18 Gauge C R S
18" BRAKE only $39.00 Capacity 18 Gauge C R S
24" BRAKE only $50.00 Capacity 20 Gauge C R S

C & S MACHINE SHOP, Dept. A-1, 8700 Grinnell, Detroit 13, Michigan

How to drill concrete



for expansion anchors . .

You can drill holes thru concrete walls, floors, ceilings, 12 to 15 times faster than by hand. Use the Wodack DO-ALL Electric Hammer. Typical example: drills a ½" hole 1" deep thru average concrete in less than 15 seconds! Saves time and money. You also use Wodack DO-ALL for channeling concrete, drilling wood, metal, etc. Investigate.

WRITE TODAY FOR BULLETIN 471-AA

Wodack Electric Tool Corporation
4627 W. Huron St., Chicago 44, Ill.

HEATING CALCULATOR

Solves Heating Problems Accurately

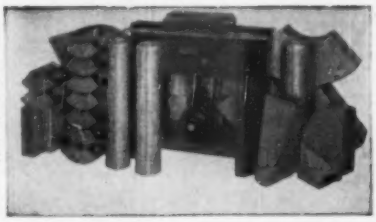
Works like a slide rule—reads like a chart. It's simple, easy and fast! Figures heat losses—warm air layouts—hot water and steam radiation. Price $2.50 including valuable booklet.

CALCULATOR SPECIALTIES CO.
122 S. Michigan Ave. Chicago 3

SHEET METAL MACHINES & TOOLS

– LOCKFORMERS –

- Chicago Steel Hand Brakes
- Chicago Steel Press Brakes
- "Rex" Spot Welders
- "Pexto" Shears, Folders, Rolls, Rotary Machines, Etc.
- Whitney Tools & Machinery
- Marshalltown Throatless Shears
- Electric Shears, Drills
- Shop Tools
- Smith Cleat Benders



Complete Line of Sheet Metal and Ventilating Supplies

WHEN IN CHICAGO VISIT OUR MACHINERY SHOWROOMS

CENTRAL-WEST MACHINERY CO.
335 SO. WESTERN AVE. HAymarket 1-8361 CHICAGO 12, ILL.

Section of

JANUARY, 1950

AMERICAN ARTISAN

1950 DIRECTORY

OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

Section 1.—Products Classified . . . . . Page 2-D

If you want to know the names of one or more manufacturers making a certain product, look in Section 1, where products are classified alphabetically in directory style with the noun governing (for instance, Warm Air Furnaces are listed as Furnaces, Warm Air).

Section 2.—Trade Names . . . . . Page 60-D

If you have the trade name of a product and want to know who manufactures it, look in Section 2, where trade names are alphabetically listed. Trade names the same as or identifiable from the company name are not listed. Manufacturers with such trade names can be readily identified under their product classification in Section 1.

Section 3.—Manufacturers' Addresses . . . . Page 81-D

For the complete name and address of any manufacturer, look in Section 3.

● The manufacturers whose names are dotted throughout the listings advertise their products in this issue. Turn to Index to Advertisers, page 98-D, for the page on which you will find the advertising of any of these manufacturers.

Section of

American Artisan

1950 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[Section 1 — PRODUCTS CLASSIFIED]

● The manufacturers whose names are dotted throughout the listings advertise their products in this issue. Turn to Index to Advertisers, page 98-D, for the page on which you will find the advertising of any of these manufacturers.

ADSORBERS, ODOR

Airkem, Inc., New York City (Air Freshening Compounds).
Carbide & Carbon Chemicals Corp., New York City
● **Connor Engineering Corp., W. B., New York City (Activated Carbon)**
Electroaire Corp., Long Island City, N. Y.

AIR CONDITIONING FURNACES

See Furnaces, Winter Air Conditioning

AIR CONDITIONING UNITS

CENTRAL PLANT, SUMMER

(Consisting of blower, filter, cooling coil for connection to remote compressor or cold water supply, and duct distribution of air)

Air & Refrigeration Corporation, New York City.
American Blower Corp., Detroit, Mich.
Auburn Burner Co., Auburn, Ind.
Baker Ice Machine Co., South Windham, Me.
● Buffalo Forge Co., Buffalo.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
● Clarage Fan Co., Kalamazoo, Mich.
Conditionaire Unit Co., Chicago.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis.
Drayer-Hanson, Inc., Los Angeles.
Frigidaire Division, General Motors Corp., Dayton, O.
General Electric Co., Bloomfield, N. J.
General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Governair Corp., Oklahoma City, Okla.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Howe Ice Machine Co., Chicago.
Ilg Electric Ventilating Co., Chicago, Ill.
Jaden Manufacturing Co., Hastings, Nebr.
Kauffman Air Conditioning Corp., St. Louis.
Kennard Corporation, St. Louis.
Lennox Furnace Co., Marshalltown, Ia.
McQuay, Inc., Minneapolis.
Marlo Coil Co., St. Louis.
● **Meyer Furnace Co., Peoria, Ill.**
Niagara Blower Co., New York City.
● **Premier Furnace Co., Dowagiac, Mich.**
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, O.
Rempe Co., Chicago.
Skinner Heating & Ventilating Co., St. Louis.
Sterling Air Conditioning Corp., Washington, D. C.
Sturtevant Co., B. F., Div. Westinghouse Electric, Hyde Park, Mass.
● Surface Combustion Corp., Toledo, Ohio.
Trane Co., LaCrosse, Wis.
● **U. S. Air Conditioning Corp., Minneapolis.**
Vilter Manufacturing Co., Milwaukee.
● **Williams Oil-O-Matic, Div. Eureka Williams Corporation, Bloomington, Ill.**
Worthington Pump & Machinery Corp., Harrison, N. J.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

CENTRAL PLANT, SUMMER-WINTER

(Consisting of blower, filter, humidifier, direct fired warm air furnace, cooling coil for connection to remote compressor or cold water supply, and duct distribution of air)

Auburn Burner Co., Auburn, Ind.
Bryant Heater Div., Cleveland, Ohio.
● **Meyer Furnace Co., Peoria, Ill.**
● **Mueller Furnace Co., L. J., Milwaukee, Wis.**
Servel, Inc., Electric Refrigeration Div., Evansville, Ind.
● Syncromatic Corp., Watertown, Wis.
● Viking Mfg. Corp., Cleveland, Ohio.

(Consisting of blower, filter, humidifier, steam generator, heating coil, cooling coil, and duct distribution of air)

Air & Refrigeration Corp., New York, N. Y.
Servel, Inc., Electric Refrigeration Div., Evansville, Ind.
● Surface Combustion Corp., Toledo, Ohio.

(Consisting of blower, filter, humidifier, reverse refrigeration cycle (heat pump), heating coil, cooling coil, and duct distribution of air)

Air-Eau-Heat, Inc., Portland, Ore.
Drayer-Hanson, Inc., Los Angeles, Calif.
General Engineering & Mfg. Co., St. Louis, Mo.
General Refrigeration Div., Beloit, Wis.
Muncie Gear Works, Inc., Muncie, Ind.
Northwest Heating, Inc., Portland, Ore.
Terra-Temp Co., Inc., Indianapolis, Ind.
Webber Engineering Corp., Indianapolis, Ind.

CENTRAL PLANT, WINTER

Consisting of blower, filter, humidifier, heating coil for connection to remote steam or hot water boiler, and duct distribution of air (split system)

Air & Refrigeration Corporation, New York City.
American Blower Corp., Detroit.
● Buffalo Forge Co., Buffalo.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
● Certified Furnace Company, St. Paul, Minn.
● Clarage Fan Co., Kalamazoo, Mich.
Drayer-Hanson, Inc., Los Angeles, Calif.
General Electric Co., Bloomfield, N. J.
Governair Corporation, Oklahoma City, Okla.
Handelan Washed Air Co., Minneapolis.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Howe Ice Machine Co., Chicago, Ill.
Jaden Manufacturing Co., Inc., F., Hastings, Nebr.
Johnson Co., S. T., Oakland, Calif., and Philadelphia.
Kauffman Air Conditioning Corp., St. Louis.
Kennard Corporation, St. Louis.
McQuay, Inc., Minneapolis.
Marlo Coil Co., St. Louis.
Metromatic Mfg. Co., Everett, Mass.
Morey, Dan, Los Angeles.
New York Blower Co., Chicago.
Niagara Blower Co., New York City.
Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, O.
Skinner Heating & Ventilating Co., Inc., St. Louis.
Sturtevant Co., B. F., Div. Westinghouse Electric, Hyde Park, Mass.
● Surface Combustion Corp., Toledo, Ohio.
● Syncromatic Corp., Watertown, Wis.
Trane Co., LaCrosse, Wis.
● U. S. Air Conditioning Corp., Minneapolis.
Western Blower Co., Seattle, Wash.
● Williams Oil-O-Matic Div. Eureka Williams Corporation, Bloomington, Ill.
Worthington Pump & Machinery Corp., Harrison, N. J.
Young Radiator Co., Racine, Wis.

EVAPORATIVE TYPE, SUMMER

(Consisting of blower, filter, pump, and sprays or mats for cooling by evaporation)

Acme Industries, Inc., Jackson, Mich.
Air Cooling Engineering Co., Morton Grove, Ill.
Air & Refrigeration Corp., New York City.
● Alton Manufacturing Co., Dallas, Tex.
American Blower Corporation, Detroit.

● Advertisement in this issue. See Index to Advertisers, page 98-D.

American Cooling Tower Co., Kansas City.
American Metal Products, Fort Worth, Tex.
April Showers Co., Inc., Washington, D. C. (Roof Spray).
Aqua-Mist Co., Topeka, Kans.
Auburn Foundry, Inc., Auburn, Ind.
Barwick Mfg. Corp., Wichita, Kans.
Beyer Oil Burner Co., Rosamond, Calif.
Campbell Heating Co., E. K., Kansas City.
Carrier Corporation, Syracuse, N. Y.
Central States Mfg. Co., Inc., Arkansas City, Kans.
Climax Machinery Company, Indianapolis, Ind.
• Comfort Products Corp., Dallas, Texas.
Dearborn Stove Co., Dallas Texas.
Essick Manufacturing Co., Los Angeles.
Farr Company, Los Angeles.
Goetti Bros., Phoenix, Ariz.
Great National Air Conditioning Corp., Oklahoma City, Okla.
• International Metal Products Company, Phoenix, Ariz.
International Sales Co., San Francisco.
Keller Metals, Bakersfield, Calif.
Leisurehouse, Inc., Wichita, Kans.
Little Giant Vaporizer Co., Oklahoma City.
Montag Stove & Furnace Works, Portland, Ore.
Morey, Dan, Los Angeles.
Mountain States Equipment Co., Denver, Colo.
National Engineering & Manufacturing Co., Kansas City, Mo.
• Palmer Manufacturing Corp., Phoenix, Ariz.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Pernot Corp., Norwalk, Calif.
Polaire Cooler Co., Phoenix, Ariz.
Reynolds Manufacturing Co., Springfield, Mo.
Rheem Manufacturing Co., New York City.
Southern Air Conditioning Manufacturing Co., Fort Worth, Texas.
Sterling Air Conditioning Corp., Washington, D. C.
Stewart Company, W. H., Oklahoma City, Okla.
Thermador Electrical Manufacturing Company, Inc., Los Angeles, Calif.
Thompson Mfg. Co., A. P., Huntington, W. Va.
• U. S. Air Conditioning Corp., Minneapolis.
• Utility Appliance Corp., Los Angeles.
Western Blower Co., Seattle, Wash.
York Corporation, York, Pa.

ROOM TYPE, FLOOR CABINET, UNDER 3 H.P. SUMMER

(Consisting of blower, filter, and cooling coil for connection to remote compressor or cold water supply)

American Coils, Inc., Newark, N. J.
• Airtemp Division, Chrysler Corp., Dayton, O.
Carrier Corp., Syracuse, N. Y.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
General Electric Co., Bloomfield, N. J.
Governair Corporation, Oklahoma City, Okla.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Ice Air Conditioning Co., Inc., Brooklyn, N. Y.
Ilg Electric Ventilating Co., Chicago.
Jaden Mfg. Co., Hastings, Nebr.
Kauffman Air Conditioning Corp., St. Louis.
Kennard Corporation, St. Louis.
King Co., Owatonna, Minn.
Mario Coil Co., St. Louis, Mo.
• Premier Furnace Co., Dowagiac, Mich.
Refrigeration Economics Co., Inc., Canton, O.
Scott-Newcomb, Inc., St. Louis.
Skinner Heating & Ventilating Co., Inc., St. Louis.
Sterling Air Conditioning Corp., Washington, D. C.
Tenney Engineering, Inc., Newark, N. J.
Trane Company, La Crosse, Wis.
Unified Air Conditioner Co., Duluth, Minn.
• U. S. Air Conditioning Corp., Minneapolis, Minn.
Worthington Pump & Machinery Corp., Harrison, N. J.
York Corp., York, Pa.

(Consisting of blower, filter, cooling coil, and compressor)

• Airtemp Division, Chrysler Corp., Dayton, O.
Carrier Corp., Syracuse, N. Y.
• General Electric Co., Bloomfield, N. J.
• Ilg Electric Ventilating Co., Chicago.
Kauffman Air Conditioning Corp., St. Louis.
Pacific Manufacturing Corporation, Cleveland (Window).
Pleasantaire Corp., Washington, D. C.
• Premier Furnace Co., Dowagiac, Mich.
Quiet-Heet Mfg. Corp., Newark, N. J.
Remington Air Conditioning Div., Remington Corporation, Cortland, N. Y.
Scott-Newcomb, Inc., St. Louis.
Skinner Heating & Ventilating Co., Inc., St. Louis.
Sterling Air Conditioning Corp., Washington, D. C.
• U. S. Air Conditioning Corp., Minneapolis, Minn.
Westinghouse Electric Corporation, Sturtevant Div., Hyde Park, Boston.
York Corp., York, Pa.

ROOM TYPE, FLOOR CABINET, UNDER 3 H.P. WINTER-SUMMER

(Consisting of blower, filter, humidifier, and heating and cooling coils for connection to steam or hot water supply and remote compressor or cold water supply)

• Airtemp Division, Chrysler Corp., Dayton, O.
American Coils, Inc., Newark, N. J.
Carrier Corp., Syracuse, N. Y.
• Clarage Fan Co., Kalamazoo, Mich.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis.
Drayer-Hanson, Inc., Los Angeles.
General Electric Co., Bloomfield, N. J.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Ice Air Conditioning Co., Inc., Brooklyn, N. Y.
Ilg Electric Ventilating Co., Chicago, Ill.
Jaden Manufacturing Co., Hastings, Nebr.
Kauffman Air Conditioning Corp., St. Louis.
Kennard Corporation, St. Louis.
McQuay, Inc., Minneapolis, Minn.
Mario Coil Co., St. Louis.
Pfening Co., Fred D., Columbus, O. (Industrial Bakery)
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, O.
Remington Corporation, Cortland, N. Y.
Rempe Company, Chicago.
Skinner Heating & Ventilating Co., Inc., St. Louis.
Sterling Air Conditioning Corp., Washington, D. C.
Trane Co., LaCrosse, Wis.
Unified Air Conditioner Co., Duluth, Minn.
• United States Air Conditioning Corporation, Minneapolis.
York Corp., York, Pa.

ROOM TYPE, FLOOR CABINET, WINTER

(Consisting of blower, filter, humidifier, and heating coil for connection to remote boiler)

Carrier Corp., Syracuse, N. Y.
• Clarage Fan Company, Kalamazoo, Mich.
Drayer-Hanson, Inc., Los Angeles, Calif.
General Electric Co., Bloomfield, N. J.
Governair Corporation, Oklahoma City, Okla.
Ilg Electric Ventilating Co., Chicago, Ill.
Kauffman Air Conditioning Corp., St. Louis.
Kehm Corporation, Chicago.
Kennard Corporation, St. Louis.
Refrigeration Economics Co., Inc., Canton, O.
Skinner Heating & Ventilating Co., Inc., St. Louis.
Sterling Air Conditioning Corp., Washington, D. C.
Somers, Inc., H. J., Detroit.
Sterling Air Conditioning Corp., Washington, D. C.
• Surface Combustion Corp., Toledo, Ohio.
Trane Co., LaCrosse, Wis.
Unified Air Conditioner Co., Duluth, Minn.
• U. S. Air Conditioning Corp., Minneapolis.
York Corporation, York, Penn.

STORE TYPE, FLOOR CABINET, OVER 3 H.P. SUMMER

(Consisting of blower, filter, cooling coil, and compressor, with air discharge approximately 6 ft above floor)

• Airtemp Division, Chrysler Corp., Dayton, O.
• Alton Manufacturing Co., Dallas, Texas.
• Automatic Firing Corp., St. Louis, Mo.
Baker Ice Machine Co., Inc., South Windham, Me.
• Bard Manufacturing Co., Bryan, Ohio.
Brunner Mfg. Co., Utica, N. Y.
Carrier Corp., Syracuse, N. Y.
• Clarage Fan Company, Kalamazoo, Mich.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis.
Frick Co., Waynesboro, Pa.
Frigidaire Div., General Motors Corp., Dayton, O.
General Electric Co., Bloomfield, N. J.
General Engineering & Mfg. Co., St. Louis, Mo.
General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Governair Corporation, Oklahoma City, Okla.
Ice Air Conditioning Co., Inc., Brooklyn, N. Y.
Kaufman Air Conditioning Corp., St. Louis.
Nat Corporation, Kansas City, Mo.
Nevinger Manufacturing Co., Inc., Greenville, Ill.
Refrigeration Appliances, Inc., Chicago.
Scott-Newcomb, Inc., St. Louis, Mo.
Skinner Heating & Ventilating Co., Inc., St. Louis.
Trane Company, LaCrosse, Wis.
• United States Air Conditioning Corporation, Minneapolis.
• Viking Manufacturing Corp., Cleveland, Ohio.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Worthington Pump & Machinery Corp., Harrison, N. J.
York Corp., York, Pa.
York-Shipley, Inc., York, Penn.

AIR DIFFUSERS

See Diffusers, Air

AIR FILTERS

See Filters, Air

AIR METERS

See Meters, Air Velocity, Direct Reading; Anemometers

AIR WASHERS

See Washers, Air

ANALYZERS, CO_2, PORTABLE

• Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Defender Instrument and Regulator Co., St. Louis.
Dwyer Mfg. Co., F. W., Chicago.
Ellison Draft Gage Co., Chicago.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Engelhard, Inc., Chas., East Newark, N. J.
General Scientific Equipment Co., Philadelphia.
Hays Corp., Michigan City, Ind.
Huyette Co., Inc., Paul B., Philadelphia.
Permutit Company, New York City.
Preferred Utilities Mfg. Corp., New York City.
Uehling Instrument Co., Paterson, N. J.

ANEMOMETERS

Detroit Air Conditioning Service Co., Detroit, Mich.
Fries Instrument Div., Baltimore, Md.
Hastings Instrument Company, Inc., Hampton, Va.
Illinois Testing Laboratories, Inc., Chicago. (thermo-electrical).
Taylor Instrument Companies, Rochester, N. Y.
Wilison Products, Inc., Reading, Pa. (Thermometer).

ANGLES, BARS, BEAMS, CHANNELS AND TEES (LIGHT WEIGHT SHAPES)

Alden Mfg. Co., Painesville, O.
Allegheny Ludlum Steel Corporation, Pittsburgh (Stainless)
Aluminum Co. of America, Pittsburgh.
American Brass Co., Waterbury, Conn.
• Bethlehem Steel Co., Bethlehem, Pa.
Byers Co., A. M., Pittsburgh, Pa. (Wrought iron structural shapes).
• Carnegie-Illinois Steel Corp., Pittsburgh.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Columbia Steel Co., San Francisco.
Dahlstrom Metallic Door Co., Jamestown, N. Y. (Angles, Channels).
Decatur Iron & Steel Co., Decatur, Ala.
Dow Chemical Co., Midland, Mich.
Harvey Machine Co., Inc., Torrance, Calif.
Inland Steel Co., Chicago.
• Inland Steel Products Company, Milwaukee.
International Steel Co., Evansville, Ind.
Jones & Laughlin Steel Corp., Pittsburgh.
Kawneer Company, Niles, Mich.
Laclede Steel Co., St. Louis, Mo. (Bars)
Penn Metal Co., Inc., New York, N. Y. (Channels)
• Republic Steel Corp., Cleveland.
• Revere Copper & Brass Incorporated, New York City.
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Truscon Steel Co., Youngstown, O.
Weirton Steel Co., Weirton, W. Va.
Youngstown Sheet & Tube Co., Youngstown, O.

ARC WELDERS

See Welders, Arc

ARC WELDING ELECTRODES

See Electrodes, Welding

ASBESTOS BOARD

See Sheets, Non-Metallic

ASBESTOS PAPER

See Paper, Asbestos

ATTIC FANS

See Fans, Night Air Cooling

AUTOMATIC HUMIDIFIERS

See Humidifiers, Furnace

AWNINGS, SHEET METAL

Kawneer Co., Niles, Mich.
KoolVent Aluminum Awning Distributors, Inc., Pittsburgh.
Russell Co., F. C., Cleveland, Ohio.
Wagner Awning & Manufacturing Co., Cleveland.

BAFFLES, COMBUSTION CHAMBER, OIL BURNER AND STOKER

Amerform Corporation, Philadelphia.
Boston Machine Works Company, Lynn, Mass.
Chicago Fire Brick Co., Chicago, Ill.
Harvey, Inc., Std. Valley Stream, N. Y.
Insulation & Refractories Co., Williamson, N. Y.
Laclede-Christy Clay Products Co., St. Louis.
• Monogram Products Co., Philadelphia, Penn.
Munn & Steele, Inc., Newark, N. J. (Stoker).
• Oil Equipment Mfg. Co., New Haven, Conn.
Peterson Co., R. A., Dowagiac, Mich.
Quigley Co., Inc., New York City.
Refractory & Insulation Corporation, New York City.
Robinson Insulation Co., Great Falls, Mont.
Stark & Company, H. W., Ann Arbor, Mich.

BAGS, DUST RECOVERY

Burnett Mills, Chicago.
Raybestos-Manhattan, Inc., Manheim, Pa.
• Wagner Awning & Mfg. Co., Cleveland.

BALANCING EQUIPMENT, FAN

Bear Mfg. Co., Rock Island, Ill.
Gisholt Machine Co., Madison, Wis.
Sundstrand Machine Tool Co., Rockford, Ill.

BAND SAWS

See Machines, Saws, Band

BAR FOLDERS

See Machines, Bar Folding

BAROMETRIC DRAFT DAMPERS

See Dampers, Draft, Barometric; Draft Diverters

BARS

See Angles, Bars, Beams, Channels, and Tees (Light weight shapes)

BASES AND PADS, VIBRATION ISOLATING

• Buffalo Forge Co., Buffalo.
• Clarage Fan Company, Kalamazoo, Mich.
Cork Import Corp., Englewood, N. J.
Cork Insulation Co., Inc., New York City.
Ehret Magnesia Manufacturing Co., Valley Forge, Pa.
Felters Co., Boston.
Firestone Tire & Rubber Co., Akron, O.
Goodrich Co., B. F., Akron, Ohio.
Hobsite Products Co., Inc., Paterson, N. J.
Johns-Manville, New York City.
Korfund Co., Inc., Long Island City, N. Y.
Lord Mfg. Co., Erie, Pa.
MB Manufacturing Company, Inc., New Haven, Conn.
Mundet Cork Corp., Brooklyn, N. Y.
National Lead Co., New York City.
Raybestos-Manhattan, Inc., Passaic, N. J.
Rockwood Mfg. Co., Inc., Indianapolis, Ind.
Sponge Rubber Products Co., Shelton, Conn.
United Cork Companies, Kearny, N. J.
United States Rubber Co., New York City.
Vibrashock Division, Robinson Aviation, Inc., Teterboro, N. J.
Vibration Eliminator Co., Long Island City, N. Y. (Cork and Rubber).
• Wagner Awning & Manufacturing Co., Cleveland.
Western Felt Works, Chicago (Felt).

BATHS, TINNING

Division Lead Co., Chicago, Ill.
Eclipse Fuel Engineering Co., Rockford, Ill.
Farrelloy Co., Philadelphia, Penn.
Retinning Manufacturing Co., Chicago.

BEADERS

See Machines, Beading

BEAMS

See Angles, Bars, Beams, Channels, and Tees (Light weight shapes)

BEARINGS, PILLOW BLOCK

• Ahlberg Bearing Co., Chicago, Ill.
• Air Controls, Inc., Cleveland.
Anti-Friction Bearings Company, Los Angeles.
Chain Belt Co., Milwaukee.
Chicago Die Casting Co., Chicago.
Congress Drives, Div. Tana Corp., Detroit, Mich.
Dick Co., Inc., R. & J., Passaic, N. J.
Dodge Mfg. Corp., Mishawaka, Ind.
Fafnir Bearing Co., New Britain, Conn.
Freed Products Co., Moline, Ill.
Goldens' Fdry. & Machine Co., Columbus, Ga.
Ideal Products Company, Oshkosh, Wis.
Jones Foundry & Machine Co., W. A., Chicago.
• Lau Blower Co., Dayton, O.
Link-Belt Co., Chicago.
Norma-Hoffmann Bearing Corp., Stamford, Conn.
Plymouth Industries, Inc., Plymouth, Ind.
• Randall Graphite Bearings, Inc., Chicago.
Royersford Foundry & Machine Co., Royersford, Pa.
Shafer Bearing Corp., Downers Grove, Ill.
SKF Industries, Inc., Philadelphia.
Standard Pressed Steel Co., Jenkintown, Pa.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Timken Roller Bearing Co., Canton, Ohio.
Triangle Manufacturing Co., Oshkosh, Wis.
Western Thermal Equipment Co., Los Angeles.
Whiteley Bearing Corp., Chicago, Ill.
Wood's Sons Co., T. B., Chambersburg, Pa.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

BELTS, V

Allis-Chalmers Mfg. Co., Milwaukee.
American Pulley Co., Philadelphia.
Browning Mfg. Co., Inc., Maysville, Ky.
Chicago Belting Co., Chicago.
Congress Drives Div. Tann Corp., Detroit.
Dayton Rubber Mfg. Co., Dayton, O.
Dick Co., Inc., R. & J., Passaic, N. J.
Dodge Manufacturing Corp., Mishawaka, Ind.
Firestone Tire & Rubber Co., Akron, O.
Gates Rubber Co., Denver, Colo.
Gilmer Co., L. H., Philadelphia, Pa.
Goodrich Co., B. F., Akron, O.
Goodyear Tire & Rubber Co., Inc., Akron, O.
Jones Foundry & Machine Co., W. A., Chicago.
Lovejoy Flexible Coupling Co., Chicago, Ill.
Manheim Mfg. & Belting Co., Manheim, Pa. (Adjustable).
Maurey Mfg. Corp., Chicago, Ill.
Pyott Foundry & Machine Co., Chicago, Ill.
Raybestos-Manhattan, Inc., Passaic, N. J.
Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown, O.
Rockwood Manufacturing Co., Inc., Indianapolis.
Thermoid Co., Trenton, N. J.
United States Rubber Co., New York City.
Wood's Sons Co., T. B., Chambersburg, Pa.
Worthington Pump & Machinery Corp., Harrison, N. J.

BLADES, PROPELLER FAN

Ackermann Manufacturing Co., Wheeling, W. Va.
Aerovent Fan Co., Inc., Piqua, Ohio.
• Air Controls, Inc., Cleveland.
Airmaster Corp., Chicago.
C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Circulators & Devices Mfg. Corp., New York City.
Dallas Engineering Co., Inc., Dallas, Tex.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Dual-Air Fan Corp., South Elgin, Ill.
Dynamic Air Engineering, Inc., Los Angeles.
Electrovent Fan & Mfg. Co., Chicago.
Goetti Bros., Phoenix, Ariz.
International Engineering, Inc., Dayton, O.
Joy Manufacturing Co., Pittsburgh, Penn.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Lakewood Engineering & Mfg. Co., Chicago.
Martin Fan & Blower Co., Chicago.
Meier Electric & Machine Co., Indianapolis, Ind.
Myers Electric Co., Pittsburgh.
National Gas Equipment Co., Inc., Terrell, Texas.
Peerless Electric Co., Warren, Ohio.
Roffy Mfg. Co., Los Angeles.
Roto-Beam Div., Peerless of America, Chicago.
South Bend Air Products, Inc., South Bend, Ind.
Skinner Heating & Ventilating Co., Inc., St. Louis.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Sturtevant Co., B. F., Div. Westinghouse Electric, Hyde Park, Mass.
Swift Mfg. Co., Inc., Hazel Park, Mich.
Thermal Industries, Indio, Calif.
Torrington Mfg. Co., Burden Div., Los Angeles, Calif.
• Utility Appliance Corporation, Los Angeles.
Victor Electric Products, Inc., Cincinnati.

BLAST GATES

• Berger Bros. Co., Philadelphia.
• Buffalo Forge Co., Buffalo.
Champion Blower & Forge Co., Lancaster, Pa.
• Clarage Fan Co., Kalamazoo, Mich.
Day Co., The, Minneapolis.
Eclipse Fuel Engineering Co., Rockford, Ill.
Goethel Sheet Metal Works, Inc., Alfred, Milwaukee.
• Kirk & Blum Mfg. Co., Cincinnati.
Maysteel Products, Inc., Milwaukee.
Newcomb-Detroit Co., Detroit, Mich.
Pohl & Hepper Mfg. Co., Inc., St. Louis.
R-S Products Corp., Philadelphia.
Rees Blow Pipe Mfg. Co., Inc., San Francisco.
Skinner Heating & Ventilating Co., St. Louis.
Spencer Turbine Co., Hartford, Conn.
Sturtevant Co., B. F., Div. Westinghouse Electric, Hyde Park, Mass.
Western Blower Co., Seattle, Wash.
Winkler & Sons, Inc., A. E., Milwaukee.

BLOW PIPE EQUIPMENT

See Blast Gates; Collectors, Blow Pipe; Fittings and Accessories, Blow Pipe

BLOWER CONTROLS

See Controls

BLOWER-FILTER UNITS, WARM AIR FURNACE

(Equipped with filter)

Advance Furnace Company, Wichita, Kans.
Agricola Furnace Co., Inc., Gadsden, Ala.
Air Conditioning Equipment Co., Minneapolis.
• Air Controls, Inc., Cleveland.
• Airtemp Div., Chrysler Corp., Dayton, Ohio.
Airwasher Corporation, Eaton Rapids, Mich.
Aladdin Heating Corporation, Oakland, Calif.
American Foundry & Furnace Co., Bloomington, Ill.
• American Furnace Co., St. Louis.
American Furnace & Foundry Co., Milan, Mich.
• American Machine Products Co., Marshalltown, Ia.
• American Radiator & Standard Sanitary Corp., Pittsburgh.
• Armstrong Furnace Co., Columbus, O.
Atlas Heating and Ventilating Co., San Francisco.
Auburn Burner Co., Auburn, Ind.
Bard Mfg. Co., Bryan, Ohio.
Bovee Furnace Works, Waterloo, Ia.
• Brundage Co., Kalamazoo, Mich.
Bryant Heater Div., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Ia.
• Char-Gale Mfg. Co., Minneapolis.
Dana Fan & Blower Corporation, Cincinnati.
• Dowagiac Steel Furnace Co., Dowagiac, Mich.
Forest City Foundries Co., Cleveland.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis
• Furbio Co., Hermansville, Mich.
Green Colonial Furnace Co., Des Moines, Ia.
• Hall-Neal Furnace Co., Indianapolis.
• Harvey-Whipple, Inc., Springfield, Mass.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Heating Assurance, Inc., Spokane, Wash.
• Henry Furnace Co., Medina, O.
• Hess Co., Chicago, Ill.
• Homer Furnace & Foundry Corp., Coldwater, Mich.
• International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco.
• Jackson & Church Co., Saginaw, Mich.
Jaden Mfg. Co., Inc., F., Hastings, Nebr.
• Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
Kelsey Heating Co., Syracuse, N. Y.
Korts Blower Mfg. Co., Grand Rapids, Mich.
• Lau Blower Co., Dayton, Ohio.
Lennox Furnace Co., Marshalltown, Ia.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
• Majestic Co., Huntington, Ind.
Marshall Furnace Co., Marshall, Mich.
Martin Fan & Blower Co., Chicago.
• Mayflower Air Conditioners, Inc., St. Paul.
• Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee.
Northwest Foundry & Furnace Co., Portland, Ore.
• Olsen Mfg. Co., C. A., Elyria, O.
• Palmer Manufacturing Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
• Peerless Foundry Co., Indianapolis.
Pennsylvania Furnace & Iron Co., Warren, Pa.
• Premier Furnace Co., Dowagiac, Mich.
• Round Oak Co., Inc., of Ind., Dowagiac, Mich.
• Ryholt Heater Co., Ashland, O.
St. Louis Furnace Mfg. Co., St. Louis.
Sandberg Manufacturing Co., Portland, Ore.
• Security Manufacturing Co., Kansas City, Mo.
• U. S. Air Conditioning Corp., Minneapolis.
• Utility Appliance Corporation, Los Angeles.
• Viking Air Conditioning Corp., Cleveland.
• Waterman-Waterbury Co., Minneapolis.
Western Blower Co., Seattle, Wash.
• Williamson Heater Co., Cincinnati.
Zick Sheet Metal Works, Dearborn, Mich.

(Equipped with humidifier and/or germicidal apparatus)

• Brundage Co., Kalamazoo, Mich.
National Air Conditioning Inc., Johnstown, Penn.

BLOWER HOUSINGS

See Housings, Blower and Fan

BLOWER-WASHER UNITS, WARM AIR FURNACE

Air Stream Filter Corp., St. Louis.
Airwasher Corporation, Eaton Rapids, Mich.
• American Machine Products Co., Marshalltown, Ia.
• Bishop & Babcock Mfg. Co., Cleveland.
• Furbio Company, Hermansville, Mich.
• Hess Warming & Ventilating Co., Chicago.
• Mueller Furnace Co., L. J., Milwaukee, Wis.
• National Engineering & Manufacturing Co., Kansas City, Mo.
New York Blower Co., Chicago.

BLOWER WHEELS

See Wheels, Blower

BLOWERS

Forced Draft, Ash Pit

American Blower Corp., Detroit.
Babbin, Inc., New York City.
• Buffalo Forge Co., Buffalo.

• Advertisement in this issue. See Index to Advertisers, page 88-D.

Champion Blower & Forge Co., Lancaster, Pa.
Champion Products Co., Muskegon, Mich.
• Clarage Fan Co., Kalamazoo, Mich.
Fasco Industries, Inc., Rochester, N. Y.
Garden City Fan Co., Chicago.
General Blower Co., Morton Grove, Ill.
General Blower Co., Inc., Philadelphia.
International Engineering, Inc., Dayton, O.
Kortz Blower Mfg. Co., Grand Rapids, Mich.
Lehigh Fan & Blower Co., Allentown, Pa.
Martin Fan & Blower Co., Chicago.
Nelson Corporation, Herman, Moline, Ill.
New York Blower Co., Chicago.
South Bend Air Products, Inc., South Bend, Ind.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Wing Mfg. Co., L. J., New York City.

Furnace, Centrifugal

Agricola Furnace Co., Inc., Gadsden, Ala.
Air Conditioning Equipment Co., Minneapolis.
• Air Controls, Inc., Cleveland.
Airecon Industries, Detroit.
Aladdin Heating Corporation, Oakland, Calif.
American Blower Corp., Detroit.
American Foundry & Furnace Co., Bloomington, Ill.
• American Furnace Co., St. Louis, Mo.
• American Machine Products Co., Marshalltown, Ia.
Atlas Heating and Ventilating Co., San Francisco.
Auburn Burner Co., Auburn, Ind.
• Bishop & Babcock Mfg. Co., Cleveland.
• Brundage Co., Kalamazoo, Mich.
• Buffalo Forge Co., Buffalo.
Campbell Heating Co., Des Moines, Ia.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corporation, Chicago.
Circulators & Devices Mfg. Corp., New York City.
• Clarage Fan Co., Kalamazoo, Mich.
Eclipse Fuel Engineering Co., Rockford, Ill.
Freed Products Co., Moline, Ill.
• Furbio Co., Hermansville, Mich.
General Blower Co., Morton Grove, Ill.
General Blower Co., Inc., Philadelphia.
Goettl Bros., Phoenix, Ariz.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
• Hess Co., Chicago, Ill.
International Sales Co., San Francisco.
Jaden Mfg. Co., Hastings, Nebr.
Kortz Blower Mfg. Co., Grand Rapids, Mich.
• Lau Blower Co., Dayton, O.
Lennox Furnace Co., Marshalltown, Ia.
MaGiri Foundry & Furnace Co., Bloomington, Ill.
• Majestic Co., Huntington, Ind.
Martin Fan & Blower Co., Chicago.
Mauer Engineering, Evanston, Ill.
• Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
• Morrison Products, Inc., Cleveland.
Mountain States Equipment Company, Denver, Colo.
• Mueller Furnace Co., L. J., Milwaukee.
New York Blower Co., Chicago.
• Palmer Manufacturing Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
• Premier Furnace Co., Dowagiac, Mich.
Schwitzer-Cummins Co., Indianapolis.
• Security Manufacturing Co., Kansas City, Mo.
Skinner Heating & Ventilating Co., Inc., St. Louis.
• Skuttle Manufacturing Co., Detroit.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Standard Heating Equipment Co., Waterloo, Ia.
Torrington Mfg. Co., Burden Div., Los Angeles, Calif.
• Trade-Wind Motorfans, Inc., Los Angeles, Calif.
• U. S. Air Conditioning Corp., Minneapolis.
• Utility Appliance Corporation, Los Angeles.
• Viking Air Conditioning Corp., Cleveland.
• Waterman-Waterbury Co., Minneapolis.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Zick Sheet Metal Works, Dearborn, Mich.

Induced Draft, Smoke Pipe

Aladdin Heating Corporation, Oakland, Calif. (Industrial)
American Foundry & Furnace Co., Bloomington, Ill.
Autogas Company, Chicago.
Babbin, Inc., New York City.
Chicago Blower Corporation, Chicago.
DeBothezat Fans Division, East Moline, Ill.
Garden City Fan Co., Chicago.
General Blower Co., Morton Grove, Ill.
Kortz Blower Mfg. Co., Grand Rapids, Mich.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Martin Fan & Blower Co., Chicago, Ill.
Nelson Corporation, Herman, Moline, Ill.
New York Blower Co., Chicago.
Perfection Stove Co., Cleveland, Ohio.
• Viking Mfg. Corp., Cleveland, Ohio.
Wing Mfg. Co., L. J., New York, N. Y.

Ventilating System (Capacity 4,000 cfm up)

• Air Controls, Inc., Cleveland.
Aladdin Heating Corporation, Oakland, Calif.
American Foundry & Furnace Co., Bloomington, Ill.
• American Machine Products Company, Marshalltown, Ia.
Atlas Heating and Ventilating Co., San Francisco.
Babbin, Inc., New York City.
• Bayley Blower Co., Milwaukee.
• Bishop & Babcock Mfg. Co., Cleveland.
• Brundage Co., Kalamazoo, Mich.
• Buffalo Forge Co., Buffalo.
Campbell Heating Company, Des Moines, Ia.
Campbell Heating Co., R. K., Kansas City, Mo.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corporation, Chicago.
Chicago Fan & Fin Coil Co., Chicago.
Circulators & Devices Mfg. Corp., New York City.
• Clarage Fan Co., Kalamazoo, Mich.
Commercialaire, Inc., Brooklyn.
Coppus Engineering Corp., Worcester, Mass.
Day Co., Minneapolis, Minn.
DeBothezat Fans Division, American Machine & Metals, Inc., East Moline, Ill.
Electrovent Fan & Mfg. Co., Chicago.
Fried Air-Kool Co., Detroit, Mich. (Cast Aluminum)
• Furbio Co., Hermansville, Mich.
Garden City Fan Co., Chicago.
General Blower Co., Morton Grove, Ill.
General Blower Co., Inc., Philadelphia.
Hartzell Propeller Fan Co., Piqua, O.
Hastings Air Conditioning Company, Inc., Hastings, Nebr.
• Ilg Electric Ventilating Co., Chicago.
International Engineering, Inc., Dayton, O.
International Sales Co., San Francisco.
Jaden Mfg. Co., Inc., F., Hastings, Nebr.
Johnson Fan & Blower Corp., Chicago.
Joy Manufacturing Co., LaDel Div., New Philadelphia, O.
Kortz Blower Mfg. Co., Grand Rapids, Mich.
• Lau Blower Co., Dayton, O.
Lehigh Fan & Blower Co., Allentown, Pa.
MaGiri Foundry & Furnace Co., Bloomington, Ill.
Martin Fan & Blower Co., Chicago.
Montag Stove & Furnace Works, Portland, Ore.
Mountain States Equipment Co., Denver, Colo.
• National Engineering & Manufacturing Co., Kansas City, Mo.
Nelson Corporation, Herman, Moline, Ill.
Newcomb-Detroit Co., Detroit, Mich.
New York Blower Co., Chicago.
Niagara Blower Co., New York City.
Northern Blower Co., Cleveland.
Peerless Electric Co., Warren, Ohio.
Phelps Mfg. Co., Little Rock, Ark.
Schwitzer-Cummins Co., Indianapolis.
Skinner Heating & Vent Co., Heater Div. of St. Louis Blow Pipe & Heater Co., St. Louis.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Trane Company, LaCrosse, Wis.
• U. S. Air Conditioning Corp., Minneapolis.
• Utility Appliance Corporation, Los Angeles.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Wing Mfg. Co., L. J., New York City.

BLOWING MACHINES, INSULATION

Allen Bilimyre Div., Lamson Corp., Mamaroneck, N. Y.
General Blower Co., Morton Grove, Ill.
Insulating Equipment Co., Chicago.
Rotary Compressor Blower Co., Grove City, Pa.
Superior Mfg. Co., Alexandria, Ind.

BOLTS, EXPANSION

Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Chicago Expansion Bolt Co., Chicago.
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Fee & Mason Mfg. Co., Inc., Manasquan, N. J.
Industrial Screw Co., Chicago.
National Lead Co., New York City.
Paine Co., Chicago, Ill.
Phillips Drill Co., Chicago (Shells).
Rawlplug Company, Inc., New York City.
Star Expansion Bolt Co., New York City.
U. S. Expansion Bolt Co., Inc., York, Pa.

BOLTS, TOGGLE AND ANCHOR

Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Chicago Expansion Bolt Co., Chicago.
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Fee & Mason Mfg. Co., Inc., Manasquan, N. J.
Huck Manufacturing Company, Detroit (Lockbolt)
Industrial Screw Co., Chicago.
Paine Co., Chicago, Ill.
Rawlplug Company, Inc., New York City.
Star Expansion Bolt Co., New York City.
U. S. Expansion Bolt Co., Inc., York, Pa.

• Advertisement in this issue. See Index to Advertisers, page 93-D.

BOMBS, SMOKE

Hill & Co., E. Vernon, Chicago, Ill. (Also guns)
Kilgore Mfg. Co., Westerville, Ohio.
Faina Fireworks Display Co., Inc., New York, N. Y.
Unexcelled Chemical Corp., New York, N. Y.

BOOSTER FANS

See Fans, Booster

BRUSHES, ACID

Division Lead Co., Chicago, Ill.
Farrelloy Co., Philadelphia, Penn.
Lukens Metal Co., Thos. F., Philadelphia.
Milwaukee Brush Mfg. Co., Milwaukee.
Osborn Mfg. Co., Cleveland.
Potomac Mfg. Co., Philadelphia.
• Schaefer Brush Mfg. Co., Milwaukee (Rustproof).
Weiss & Co., H., New York City.

BRUSHES, FURNACE

Brushes & Brooms Co., New York City.
Milwaukee Brush Mfg. Co., Milwaukee.
Osborn Mfg. Co., Cleveland.
• Schaefer Brush Mfg. Co., Milwaukee.
Worcester Brush & Scraper Co., Worcester, Mass.

BUFFERS, GRINDERS, POLISHERS, AND SANDERS

Electric

Albertson & Co., Inc., Sioux City, Iowa.
Baldor Electric Co., St. Louis. (Buffers, grinders)
Black & Decker Mfg. Co., Towson, Md.
Brown-Brockmeyer Co., Inc., Dayton, O.
Buckeye Tools Corp., Dayton, O.
Chicago Pneumatic Tool Co., New York City.
DeSoto Oil Burner Corp., York, Penn.
DoAll Company, Des Plaines, Ill.
H & H Research Co., Detroit
Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Haskins Co., R. G., Chicago, Ill. (Flexible shaft)
Hobart Brothers Company, Troy, O.
Independent Pneumatic Tool Co., Aurora, Ill.
Jefferson Machine Tool Co., Cincinnati.
Lee Co., K. O. Aberdeen, S. D.
L'Hommedieu & Sons Company, Chas. F., Chicago.
Mall Tool Co., Chicago.
Millers Falls Co., Greenfield, Mass.
Minnesota Mining & Manufacturing Co., St. Paul, Minn.
Misener Mfg. Co., Inc., Syracuse, N. Y.
Portable Electric Tools, Inc., Chicago, Ill.
Reynolds Electric Co., River Grove, Ill.
Rotor Tool Company, Cleveland, (Portable).
• Skilsaw, Inc., Chicago.
Small Motors, Inc., Chicago, Ill.
Snap-on Tools Corp., Kenosha, Wis.
Speedway Manufacturing Company, Cicero, Ill.
Stanley Electric Tool Div., The Stanley Works, New Britain, Conn.
Stow Manufacturing Co., Binghamton, N. Y. (Flexible shaft)
Syntron Co., Homer City, Pa.
United States Electrical Tool Co., Cincinnati.
U. S. Electrical Motors, Inc., Los Angeles. (Buffers)
Valley Electric Co., St. Louis, Mo.
Van Dorn Electric Tool Co., Towson, Md.
Wyzenbeek & Staff, Inc., Chicago.
York Electric and Machine Company, York, Pa.

Pneumatic

Chicago Pneumatic Tool Company, New York City. (Grinders)
Ideal Commutator Dresser Co., Sycamore, Ill.
Independent Pneumatic Tool Co., Aurora, Ill.
Keller Tool Company, Grand Haven, Mich.
Rotor Tool Company, Cleveland. (Portable)
• Skilsaw, Inc., Chicago, Ill.
Sunstrand Machine Tool Co., Rockford, Ill.

BURNERS, CONVERSION, RESIDENTIAL

Gas

Adams Mfg. Co., The, Cleveland, Ohio.
Adams Manufacturing Co., Cleveland.
Alco-Derse Co., Chicago.
• American Furnace Co., St. Louis, Mo.
American Gas Burner, Inc., Indianapolis.
American Heating & Engineering Co., New Albany, Ind.
• American Radiator & Standard Sanitary Corp., Pittsburg.
Anchor Burner Co., Oklahoma City, Okla.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
• Armstrong Furnace Co., Columbus, Ohio.
Ashton Products, Inc., Detroit.
Auburn Burner Co., Auburn, Ind.
Autogas Company, Chicago.
• Automatic Firing Corporation, St. Louis.
Automatic Furnace Co., Lansing, Mich.
Automatic Gas Equipment Co., Pittsburgh.
Banner Burner Co., Youngstown, Ohio.
• Barber Gas Burner Co., Cleveland.
Bard Manufacturing Company, Bryan, Ohio.
Barton Co., Minneapolis.
Beck Engineering Combustion Kompany, St. Louis.
Berger Furnace Mfg. Co., Pittsburgh.
B. G. B. Manufacturing Co., Dearborn, Mich.
Bowlby Air Devices Co., Wichita, Kan.
Brown Hart Engineering Corp., Hazel Park, Mich.
Bryant Corporation, C. L., Cleveland
Bryant Heater Div., Cleveland, Ohio.
Budco, Inc., Detroit.
Burdett Mfg. Co., Chicago.
Calesco Corporation, Lynn, Mass.
Central States Mfg. Co., Inc., Arkansas City, Kans.
• Century Engineering Corp., Cedar Rapids, Iowa.
Ceramic Products Mfg. Co., Milwaukee.
• Certified Furnace Company, St. Paul.
Columbia Burner Co., Toledo.
• Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago.
Dalsen Tool & Manufacturing Co., Detroit.
• Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Denver Fire Clay Co., Denver, Colo.
Detroit Universal Products, Detroit.
Dornback Furnace & Foundry Co., Cleveland.
Dunn-Rite Products, Garden City, Mich.
Economo Gas Products Co., Detroit.
Even-Air Mfg. & Sales Co., Detroit.
F & E Manufacturing Co., Centerville, Calif.
• Famous Furnace Co., Cleveland, Ohio.
Finn Engineers, Inc., Jerry, St. Paul.
Firewel Co., Inc., Buffalo, N. Y.
Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md.
Gasco Industries, Inc., Detroit.
Geisel Manufacturing, Inc., Elyria, Ohio.
• Glasby Manufacturing Co., Inc., J. P., Belleville, N. J.
Goodfriend Plb. & Htg. Burner Sales, Detroit.
Gregory Co., J. G., Chicago.
• Handley-Brown Heater Co., Jackson, Mich. (Ashpit & fuel door types)
Hansen Electric Co., San Francisco.
Harvey-Whipple, Inc., Springfield, Mass.
Heatcraft Company, Louisville, Ky.
Hel-Mor Burner Corporation, Detroit.
Hook & Ackerman, Inc., New York, N. Y.
Hook & Miller, Pittsburgh, Penn.
Horsman-Markin Corp., Detroit.
H-P Products, Louisville, Ohio.
Hutchinson Burner & Mfg. Co., Hutchinson, Kan.
Inferno Co., Shreveport, La.
Iron Fireman Mfg. Co., Cleveland, Ohio. (Nat., mfgd., mixed & LP)
• Jackson & Church Co., Saginaw, Mich.
Jackson Gas Burner Corp., Detroit.
Johnson Co., S. T., Oakland, Calif.
• Johnson Gas Appliance Co., Cedar Rapids, Iowa.
Junior Co., J. C., Kansas City, Mo.
Ken-Joy Gas Burner Co., Milwaukee.
Killam Gas Burner Co., Denver, Colo. (Nat., mfgd., & LP gas)
Kindl-Aire Corp., Cleveland, Ohio. (Nat, Mfg., LP)
Kleenair Furnace Co., Portland, Ore. (Nat., Mfg.)
Lientz Co., B. P., Kansas City, Mo.
Lundt, Inc., Ernest C., Little Falls, N. J.
McDaniel Mfg. Co., Inc., Dallas, Texas.
Martin Co., Inc., J. O., San Francisco, Calif.
Maxwell-Heatwell Co., Denver, Colo.
• Mayflower Air Conditioners, Inc., St. Paul, Minn.
Mid-Continent Metal Products Co., Chicago.
Miller-Special Gas Heating Co., Chicago.
Modern Controls Corporation, Detroit.
Monad Products Co., Dearborn, Mich.
Moncrief Furnace & Mfg. Co., Dallas, Tex.
Moore Equipment Company, Lincoln, Nebr.
• Mueller Furnace Co., L. J., Milwaukee.
Multi-Therm Mfg. Co., Inc., Detroit.
Muncie Burner Mfg. Co., Romulus, Mich.
National Burner & Mfg. Co., Detroit.
• National Engineering & Mfg. Co., Kansas City, Mo.
National Gas Burner Div., Mid-Continent Metal Products Co., Chicago.
National Stoker Co., St. Louis.
Niagara Motors Corporation, Dunkirk, N. Y.
• Norge Heat Div. Borg-Warner Corp., Detroit, Mich.
Norman Products Co., Inc., Columbus, Ohio.
Olmstead & Co., Chas. M., Detroit.
Paramount Supply Co., Lincoln, Nebr.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Premier Burner Co., Cleveland.
Pyro-Jet Div., Riverside Steel Co., Wheeling, W. Va.
Radiant Burners, Inc., Lombard, Ill.
Ransome Co., Emeryville, Calif.
Rapid Heat Corporation, Detroit.
Ray Oil Burner Co., San Francisco, Calif. (Industrial)
• Reinhard Brothers Co., Minneapolis, Minn.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Revere Products, Inc., Detroit.
Reznor Mfg. Co., Mercer, Penn.
Roberts-Gordon Appliance Corp., Buffalo.
Roberts Manufacturing Co., Flint, Mich.
• Rybolt Heater Co., Ashland, Ohio.
S and S Heating Co., Detroit.
Schwab Safe Company, Lafayette, Ind.
• Security Manufacturing Co., Kansas City, Mo.
Shott & Co., Ed., Cincinnati, Ohio.
Silver Flame Industries, Inc., Detroit.
Smith Corp., A. O., Toledo, Ohio.
Sonner Burner Co., Winfield, Kan.
Standard Fuel Engineering Co., Detroit.
Standard Heating & Radiator Co., Pittsburgh.
Sterling Burner Corporation, Detroit.
Sterling Engineering Co., St. Louis.
Sullivan Valve & Engineering Co., Butte, Mont.
Sunny Sue Burner Co., Syracuse, N. Y.
Supreme Gas Burner Mfg. Co., Detroit.
• Surface Combustion Corp., Toledo, Ohio.
Taylor Appliance & Mfg. Co., Royal Oak, Mich.
Temtrol Mfg. Co., Detroit.
Thermomatic Corporation, Willoughby, Ohio.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
• Toridheat Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Triad Products Corporation, Chicago.
Twin City Gas Specialty Co., Minneapolis, Minn.
Vacuum Gas Burner Corp., Olean, N. Y.
Van Tuyl & Associates, J. E., Cleveland.
Vander Kaay Burner Co., Cleveland.
Van's Gas Burner Service, Detroit.
• Waterman-Waterbury Co., Minneapolis.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Webster Engineering Co., Tulsa, Okla.
Will-Burt Co., Orrville, Ohio.
Williams, Inc., F. C., Detroit.
Zephyr Heating Products Co., Cleveland.
• Zink Co., John, Tulsa, Okla.

Gas-Oil Combination

• Automatic Firing Corp., St. Louis, Mo.
Junior Co., J. C., Kansas City, Mo.
Lundt, Inc., Ernest C., Little Falls, N. J.
Preferred Utilities Mfg. Corp., New York, N. Y.
Quiet Automatic Burner Corp., Newark, N. J.
Ray Oil Burner Co., San Francisco, Calif.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
• Siemon & Co., Kansas City, Mo.
Simplex Oil Heating Corp., New York, N. Y.
United Air Heaters, Inc., Seattle, Wash.

Oil

Ace Engineering Company, Chicago, (Rotary-Ind. & Comm.)
Acme Heat & Power Co., Inc., Brooklyn. (Gun)
Acme Oil Burner Company, Inc., Cedar Rapids, Ia. (Gun).
Air Filter Corporation, Milwaukee (Gun)
Airflame, Inc., Waukegan, Ill. (Gun)
• Airtemp Division, Chrysler Corp., Dayton, Ohio.
Aldrich Co., Wyoming, Ill. (Gun)
All-Gas Equipment Company, Milwaukee 8.
• American Furnace Co., St. Louis, Mo. (Gun)
American Mohawk Company, Inc., New York City (Gun)
• American Radiator & Standard Sanitary Corp., Pittsburgh (Gun)
Anchor Div., Stratton & Terstegge Co., New Albany, Ind. (Gun)
Anderson Oil Heating Co., Seattle (Gravity)
• Armstrong Furnace Co., Columbus, Ohio. (Gun)
Ashton Products, Inc., Detroit. (Gun)
Auburn Burner Co., Auburn, Ind. (Gun)
• Auto-Heat Corp., Middletown, Conn. (Gun)
Automatic Burner Corp., Chicago. (Gun)
• Automatic Firing Corp., St. Louis, Mo. (Gun)
Automatic Furnace Co., Lansing, Mich. (Vaporizing)
Avery Farm Machinery Co., Hart Oil Burner Dept., Peoria, Ill. (Gun).
Bard Manufacturing Company, Bryan, Ohio.
Beall Pipe & Tank Corp., Portland, Ore. (Range)
Beaver Mfg. Co., Portland, Ore. (Gun)
Beckett Corporation, R. W., Elyria, Ohio (Gun).
Bethlehem Foundry & Machine Co., Bethlehem, Pa., (Gun).
Beyer Oil Burner Co., Rosamond, Calif. (Gravity)
Boston Machine Works Company, Lynn, Mass. (Gravity)
Bovee Furnace Works, Waterloo, Ia. (Gun).
Breese Burners, Inc., Santa Fe, N. Mex. (Gravity)
Breese Corporations, Inc., Newark, N. J. (Gun)
Bryan Steam Corp., Peru, Ind. (Gun).
Burner Devices, Arcadia, Calif. (Gravity)
Calesco Corporation, Lynn, Mass.
Calimode, Inc., Atlanta, Ga. (Gravity)
Caloroil Burner Corp., Hartford, Conn. (Gun).
Cary Mfg. Co., Waupaca, Wis. (Gravity).
Catskill Metal Works, Inc., Catskill, N. Y. (Gun)
• Century Engineering Corp., Cedar Rapids, Ia. (Gun).
Chalmers Oil Burner Co., Minneapolis (Gun and rotary).
Chandler Company, Cedar Rapids, Iowa (Gun and gravity).
Chicago Steel Furnace Co., Chicago.
Cleaver-Brooks Company, Hev-E-Oil Div., Milwaukee. (Gun)
Coal-O-Matic Co., Trucksville, Penn. (Gun)
• Conco Engineering Works, Mendota, Ill. (Gun, vaporizing)
Consolidated Industries, Inc., Lafayette, Ind. (Gun)
Cooper & Cooper, Inc., Pittsfield, Mass. (Gun)
Crane Company, Chicago (Gun).
Dalmo-Victor Co., San Carlos, Calif.
• Delco Appliance Div., General Motors Corp., Rochester, N. Y. (Gun)
D'Elia Oil Burner Co., Inc., Bridgeport, Conn. (Gun).
DeLuxe Oil Burner Co., Seattle, Wash.
DeSoto Oil Burner Corp., York, Penn. (Gun and gravity)
• Dowagiac Steel Furnace Co., Dowagiac, Mich. (Gun).
Duniflame Div., H. & K. Appliance Co., Lima, Ohio. (Gun-with integral dom. water htg. unit)
East Coast Co., Boston, Mass. (Gun)
Eastern Oil & Equipment Co., Portland, Me. (Gun).
Eckhart Mfg. Co., Inc., Union, N. J. (Gun)
Eddy Stoker Corporation, Chicago (Gun)
Electric Furnace-Man, Inc., Emmaus, Penn. (Gun)
Electro-Watt Inc., Seattle, Wash. (Gun)
• Electrol Burner Manufacturing Co., Inc., Rutherford, N. J. (Gun)
Fairfield Oil Heating Co., Inc., Greenwich, Conn (Gun)
Florence Stove Co., Gardner, Mass. (Gravity).
Fluid Heat Division, Anchor Post Products, Inc., Baltimore (Gun, rotary).
Forest City Foundries Co., Cleveland (Gun).
Freeport Burner & Fan Co., Freeport, Ill. (Gun).
General Electric Co., Bloomfield, N. J. (Gun)
General Machine Co., Inc., Emmaus, Pa. (Gun)
• General Oil Burner Corporation, Baltimore, Md. (Gun)
General Oil Heating Corp., West New York, N. J. (Gun).
Gilbert & Barker Mfg. Co., West Springfield, Mass. (Gun)
Green Colonial Furnace Company, Des Moines, Iowa (Gun).
• Hall-Neal Furnace Company, Indianapolis (Gun).
Harvey, Inc., Sid, Valley Stream, N. Y. (Gun)
Harvey-Whipple, Inc., Springfield, Mass. (Gun).
Heatcraft Company, Louisville, Ky. (Gun)
Heating Specialties Co., Baltimore, Md. (Gravity)
Heat-Seal Burner Co., Omaha, Nebr. (Gun).
Hell Co., Milwaukee, Wis. (Gun).
Herco Oil Burner Corp., Lancaster, Pa. (Gun).
Hershey Machine & Foundry Co., Manheim, Penn. (Gun).
• Hess Co., Chicago, Ill. (Gun & Gravity).
HomEase Products Div., Paterson, N. J. (Gun)
• Homer Furnace & Foundry Corp., Coldwater, Mich. (Gun)
Hotentot Co., Inc., Omaha, Nebr. (Gun).
Howell Engineering Corp., Oregon, Ill. (Gun)
Hueller Mfg. Co., Inc., H. J., Brooklyn, N. Y. (Gun)
International Oil Burner Co., St. Louis
Iron Fireman Mfg. Co., Cleveland, Ohio. (Gun).
• Jackson & Church Co., Saginaw, Mich. (Gun).
Jackson G Gilmore & Co., Columbus, O. (Vaporizing)
Johnson Co., S. T., Oakland, Calif. and Philadelphia (Gun).
Junior Co., J. C., Kansas City, Mo.
Keith Furnace Co., Des Moines, Ia. (Gun).
Kleen-Heet, Inc., Chicago, Ill. (Gun).
• Kresky Mfg. Co., Inc., Petaluma, Calif. (Gravity).
Kresno-Stamm Co., Palisades Park, N. J. (Gravity)
Laco Oil Burner Co., Inc., Griswold, Ia. (Gun and Gravity).
LaSalle Oil Burner Co., Seattle, Wash. (Gun)
Lennox Furnace Co., Marshalltown, Iowa. (Gun).
Little Burner Co., Inc., H. C. San Rafael, Calif. (Gravity).
McKee Air Conditioning Company, Minneapolis (Rotary)
McPherson Furnace & Supply Co., Portland, Ore. (Gun).
• Majestic Co., Huntington, Ind. (Gun & gravity).
Malleable Iron Fittings Co., Branford, Conn. (Gun).
Mason Machine Co., Inc., York, Penn. (Gun).
• Mayflower Air Conditioners, Inc., St. Paul, Minn.
Mason Machine Co., York, Pa. (Continuous variable flame).
May Oil Burner Div., Gerotor May Corp., Baltimore (Gun).
Mechanical Products Co., Seattle, Wash. (Gun)
Metromatic Mfg. Co., Everett, Mass.
• Meyer Furnace Co., Peoria, Ill. (Gun & gravity).
Miller Company, Heating Products Div., Meriden, Conn. (Gravity).
Montag Stove & Furnace Works, Portland, Ore. (Gun).
Moore Equipment Company, Lincoln, Nebr. (Gun).
Mt. Hawley Mfg. Co., Peoria, Ill. (Gun).
• Mueller Furnace Co., L. J., Milwaukee, Wis. (Gun, gravity)
National Airoil Burner Co., Philadelphia (Gun).
National Oil Burner Co., Brooklyn. (Gun, Rotary)
• Norge Heat Div., Borg-Warner Corp., Detroit, Mich. (Gun).
Norman Products Co., Inc., Columbus, Ohio. (Gravity).
Northwest Foundry & Furnace Co., Portland, Ore. (Gun)
• Nu-Way Corp., Rock Island, Ill. (Gun).
Oil Equipment Laboratories, Inc., Elizabeth, N. J. (Gun).
Packaged Oil Burner Mfg. Co., Inc., Chicago. (Gun)
Pan-American Engineering Company, Berkeley, Calif. (Gun, rotary and turbine).
Paragon Oil Burner Corp., Brooklyn (Gun).
Paramount Supply Co., Lincoln, Nebr. (Gun)
Paterson, Stanley C., Boston (Gun)
Peerless Oil Burner Co., Inc., Kansas City, Mo. (Gravity).
Penn Boiler & Burner Mfg. Corp., Lancaster, Pa. (Gun).

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Persson & Kellison, Seattle, Wash. (Gun, bakery)
• Petroleum Heat & Power Co., Stamford, Conn. (Gun).
Preferred Utilities Manufacturing Corp., New York, N. Y. (Rotary)
Quaker Mfg. Co., Chicago, Ill. (Vaporizing Bowl).
Quick Furnace & Supply Co., Des Moines, Ia.
Quiet Automatic Burner Corp., Newark, N. J. (Gun)
Quiet-Heet Mfg. Corp., Newark, N. J. (Gun).
Quincy Stove Mfg. Co., Quincy, Ill. (Gravity).
Radiant Utilities Corp., Brooklyn, N. Y. (Gun)
Rapid Heat Corporation, Detroit.
Ray Oil Burner Co., San Francisco (Gun and rotary).
Rayfield Company, C. L., Chicago, Ill. (Gun & rotary).
Red Wing Oil Burner Co., Inc., Chelsea, Mass. (Gun)
Reif-Rexoil, Inc., Buffalo, N. Y. (Gun, Rotary)
Richfield Manufacturing Corp., Baldwin, L. I., N. Y. (Gun)
Ronci Co., Inc., F., Centredale, R. I. (Gun)
Rossoe Mfg. Co., Seattle, Wash. (Gun)
• Round Oak Co., Inc., of Ind., Dowagiac, Mich. (Gun)
Rudy Mfg. Co., Dowagiac, Mich. (Gun).
• Rybolt Heater Co., Ashland, Ohio.
Sandberg Manufacturing Co., Portland, Ore. (Gun)
Schwab Safe Company, Lafayette, Ind. (Gun)
Scott-Newcomb, Inc., St. Louis (Gun).
Selectrol Engineering Co., Brooklyn (Gun)
Shedlov Oil Burners, Inc., Minneapolis (Gun).
Silent Glow Oil Burner Corp., Hartford, Conn. (Gun and rotary).
Silent Sioux Oil Burner Corp., Orange City, Iowa. (Gravity)
Simplex Oil Heating Corp., New York (Gun,rotary, turbine).
Spark Stove Co., Oakland, Calif.
Standard Arcoil Corp., Newark, N. J. (Gun)
Stokol Stoker Company, Inc., Dayton, Ohio. (Gun)
• Sundstrand Engineering Co., Rockford, Ill. (Gun).
Sun-Fire Stoker Corporation, New Albany, Ind. (Gun).
Sun-Ray Burner Mfg. Corp., Jamica, N. Y. (Gun)
• Syncromatic Corp., Watertown, Wis. (Gun)
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich. (Gun and rotary).
• Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio. (Gun, Rotary)
Tru-Heet Co., Trenton, N. J. (Gun)
U. S. Machine Corporation, Lebanon, Ind. (Gun)
United States Radiator Corp., Detroit, Mich. (Gun).
Universal Steel Fabricating Co., Seattle, Wash. (Gun)
Victor Oil Burner Mfg. Co., Hartford, Conn. (Gravity).
• Viking Mfg. Corp., Cleveland, Ohio. (Gun)
Volcano Burner Corp., New York City (Gun).
Waltham Oil Burner Co., E. Boston, Mass. (Gun)
• Waterman-Waterbury Co., Minneapolis (Gun).
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I. (Gun).
Westwick & Son, Inc., John, Galena, Ill. (Gun).
Will-Burt Co., Orrville, Ohio (Gun)
• Williams Oil-O-Matic, Div. Eureka Williams Corporation, Bloomington, Ill. (Gun).
Wisconsin Oil Burner Co., Madison, Wis. (Gun)
York Electric and Machine Company, York, Pa. (Gun, Gravity).
York-Shipley, Inc., York, Pa. (Gun).

BURRING MACHINES

See Machines, Burring

CABINETS AND CASINGS

• Acme Manufacturing Company, Philadelphia.
Airwasher Corporation, Eaton Rapids, Mich.
• Armstrong Furnace Company, Columbus, Ohio.
• Atlas Mfg. Co., St. Paul, Minn.
Berger Furnace Mfg. Co., Pittsburgh, Penn.
Berger Mfg. Co., Div. of Republic Steel Corp., Canton, O.
Bierzach & Neidermeyer Company, Milwaukee.
• Brundage Co., Kalamazoo, Mich.
• Char-Gale Mfg. Co., Minneapolis.
• Chicago Metal Mfg. Co., Chicago.
Dahlstrom Metallic Door Co., Jamestown, N. Y. (Special)
Edwards Manufacturing Co., Inc., Cincinnati, Ohio.
Falstrom Co., Passaic, N. J.
Harrison Sheet Steel Co., Chicago.
• Kirk & Blum Mfg. Co., Cincinnati, O.
• Lau Blower Co., Dayton, O.
Lennox Furnace Co., Marshalltown, Ia.
Lindsay Structure, Inc., Skokie, Ill.
Maysteel Products, Inc., Milwaukee.
Moss Industries, Inc., Brooklyn, N. Y.
Northwest Foundry & Furnace Co., Portland, Ore.
Riester & Thesmacher Co., Cleveland.
St. Charles Mfg. Co., St. Charles, Ill.
Standard Pressed Steel Co., Jenkintown, Pa.
Steinhorst & Sons, Inc., Emil, Utica, N. Y.
Utica Products, Incorporated, Utica, N. Y.
Zick Sheet Metal Works, Dearborn, Mich.

CAPS AND TOPS, CHIMNEY

• Accurate Sheet Metal & Mfg. Works, Chicago (also revolving)
• Acme Manufacturing Company, Philadelphia.
• Adams Company, The, Dubuque, Iowa.
Airjet Ventilator Co., Pasadena, Calif.
Ames Co., W. R., San Francisco.
Berger Furnace Mfg. Co., Pittsburgh, Penn.
Bieler & Son, L., Long Island City (Shanty and revolving).
Breidert Co., G. C., Los Angeles.
Coleman Company, Inc., Wichita, Kans. (Crowns)
Edwards Mfg. Co., Inc., Cincinnati.
Excelsior Steel Furnace Co., Chicago.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Hirschman-Pohle Co., Inc., Lefloy, N. Y.
Iwan Brothers, South Bend, Ind.
Lamb & Ritchie Co., Cambridge, Mass.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles.
Messer Co., J. H., Pittsburgh.
Penn Supply & Metal Corporation, Philadelphia.
Penn Ventilating Co., Philadelphia, Penn.
Royal-Apex Mfg. Corp., Brooklyn.
Schoedinger, F. O., Columbus, O.
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Sterling Foundry Company, Sterling, Ill. (Cast Iron).
Tierney Rotor Ventilator Co., Minneapolis.
• Williams-Wallace Co., San Francisco, Calif.

CASINGS

See Cabinets and Casings

CAULKING COMPOUNDS

See Compounds, Caulking

CEILINGS, METAL

• Ajax Furnace Fitting Div., Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Edwards Mfg. Co., Inc., Cincinnati.
Friedley-Voshart Co., Chicago.
Harrison Sheet Steel Co., Chicago.
Hauserman Co., E. F., Cleveland.
Klauer Mfg. Co., Dubuque, Ia.
Reynolds Metals Company, Louisville, Ky. (Aluminum).
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Tiffin Art Metal Co., Tiffin, O.
Wheeling Corrugating Co., Wheeling, W. Va.

CEMENT

Furnace

Acme Asbestos Covering & Flooring Co., Chicago.
• Armstrong Co., Detroit.
Botfield Refractories Co., Philadelphia.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Chicago Fire Brick Company, Chicago.
Clinton Metallic Paint Co., Clinton, N. Y. (Asbestos)
Continental Products Co., Euclid, O.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Fireline Stove & Furnace Lining Co., Chicago, (Asbestos).
Hercules Chemical Co., Inc., New York City.
Hetzel Roofing Products Co., Newark, N. J.
Johns-Manville, New York City.
Keasbey Co., Robert A., New York, N. Y. (Asbestos).
Laclede-Christy Clay Products Co., St. Louis.
Lastik Products Co., Inc., Pittsburgh.
McLeod & Henry Co., Inc., Troy, N. J.
Munn and Steele, Inc., Newark, N. J.
Nebel Manufacturing Co., Cleveland.
Pecora Paint Co., Philadelphia, Penn.
Plastic Products Co., Detroit.
Preferred Utilities Mfg. Corp., New York City.
Pressitite Engineering Co., St. Louis.
Quigley Company, Inc., New York City.
Refractory & Insulation Corp., New York City.
Ruberoid Co., New York City.
Rutland Fire Clay Co., Rutland, Vt.
• Sall Mountain Co., Chicago.
Sauereisen Cements Co., Pittsburgh, Penn.
S.O.R. Products Co., Inc., Brooklyn, N. Y.
Standard Asbestos Mfg. Co., Chicago.
Standard Fuel Engineering Co., Detroit.
Tamms Industries, Inc., Chicago, Ill. (Asbestos)
United Gilsonite Laboratories, Scranton, Pa.
Walsh Refractories Corp., St. Louis.
• Wilson, Inc., Grant, Chicago (Asbestos).

Insulating

Acme Asbestos Covering & Flooring Co., Chicago (Asbestos, mineral wool and magnesia).
Alton Mineral Wool Insulation Co., St. Louis (High Temperature).
Armstrong Cork Co., Lancaster, Penn.
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Bird Archer Co., Philadelphia.

• Advertisement in this issue. See Index to Advertisers, page 95-D.

Botfield Refractories Co., Philadelphia.
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos, magnesia, rock wool)
Chicago Fire Brick Co., Chicago (Asbestos).
Denver Fire Clay Co., Denver, Ohio. (Vermiculite and rock wool; high temperature)
Eagle-Picher Co., Cincinnati (Asbestos).
Ehret Magnesia Mfg. Co., Valley Forge, Pa. (Asbestos).
Green Fire Brick Company, A. P., Mexico, Mo. (Mineral Wool)
Hetzel Roofing Products Co., Newark, N. J.
International Vermiculite Co., Girard, Ill.
Johns-Manville, New York City (Asbestos).
Kensbey Co., Robert A., New York City (Asbestos).
Kensbey & Mattison Co., Ambler, Pa. (Asbestos).
Laclede-Christy Clay Products Company, St. Louis, Mo. (Asbestos)
McLeod & Henry Co., Inc., Troy, N. Y.
Munn and Steele, Inc., Newark, N. J. (Vermiculite).
National Gypsum Co., Buffalo (Rock Wool).
Norristown Magnesia & Asbestos Co., Norristown, Penn. (Asbestos, rockwool & magnesia)
Ohmiac Paint & Refining Co., Chicago (Asphalt, Asbestos).
• Owens-Corning Fiberglas Corp., Toledo, O. (Mineral wool).
Peterson Co., B. A., Dowagiac, Mich. (Asbestos).
Plant Rubber & Asbestos Works, Inc., San Francisco (Asbestos).
Preferred Utilities Mfg. Corp., New York City.
Pyrolite Products Co., Cleveland.
Quigley Company, Inc., New York City (Asbestos).
Ramtite Co., Div. of Obermayer Co., Chicago.
Refractory & Insulation Corp., New York, N. Y. (Castable refractory)
• Rex Clay Products, Detroit, Mich.
Robinson Insulation Co., Great Falls, Mont. (Vermiculite).
Ruberoid Co., New York City (Asbestos).
Rutland Fire Clay Co., Rutland, Vt. (Asbestos).
• Sall Mountain Co., Chicago.
Sauereisen Cements Co., Pittsburgh.
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
Standard Fuel Engineering Co., Detroit (Rock wool and asbestos).
Therminsul Corp., Kalamazoo, Mich.
Thompson & Co., Oakmont, Penn. (Asbestos)
United States Mineral Wool Co., South Milwaukee, Wis. (High temperature mineral wool).
Zonolite Co., Chicago, Ill. (Insulating plastic)
• Wilson, Inc., Grant, Chicago (Asbestos).

Roof

Acme Asbestos Covering & Flooring Co., Chicago.
American-Marietta Company, Chicago.
• Armstrong Co., Detroit.
Baer Brothers, New York, N. Y.
Barrett Division, Allied Chemical & Dye Corporation, New York City.
Bird & Son, Inc., East Walpole, Mass.
Blue Ridge Talc Co., Inc., Henry, Va.
Calbar Paint & Varnish Co., Philadelphia.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Carter Paint Co., Liberty, Ind.
Celotex Corp., Chicago.
Certain-teed Products Corp., Ardmore, Pa.
Clinton Metallic Paint Co., Clinton, N. Y.
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Continental Products Co., Euclid, O.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Flintkote Co., New York City.
Ford Roofing Products Co., Chicago.
Glidden Co., Cleveland.
Hetzel Roofing Products Co., Newark, N. J.
Horn Co., Inc., A. C., Long Island City, N. Y.
• Inland Steel Products Company, Milwaukee.
Iowa Paint Mfg. Co., Des Moines, Ia. (Asphalt).
Johns-Manville, New York City.
Koppers Company, Inc., Pittsburgh.
Lastik Products Co., Inc., Pittsburgh.
Lehon Company, Chicago.
Midland Paint & Varnish Co., Cleveland (Fiberseal).
National Mfg. Corp., Tonawanda, N. Y.
Nebel Manufacturing Co., Cleveland.
North American Fibre Products Co., Cleveland.
Ohmiac Paint & Refining Co., Chicago.
Pacora Paint Co., Philadelphia (Asbestos).
Potts-Farrington Co., Philadelphia, Penn.
Prestite Engineering Co., St. Louis.
Proie & Coogan Heating Co., Pittsburgh.
Ruberoid Co., New York City.
Rutland Fire Clay Co., Rutland, Vt.
Smooth-On Mfg. Co., Jersey City, N. J.
Sonneborn Sons, Inc., L., New York City.
Southport Paint Co., Savannah, Ga.
Thompson & Co., Oakmont (Pittsburgh Dist.), Pa.
Tropical Paint & Oil Co., Cleveland.
United Gilsonite Laboratories, Scranton, Pa.
United States Gypsum Co., Chicago.

CEMENT, REFRACTORY

See Refractories

CHAIN, FURNACE

American Chain Div., American Chain & Cable Co., Inc., York, Pa.
Bead Chain Mfg. Co., Bridgeport, Conn.
Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
• Hart & Cooley Mfg. Co., Holland, Mich.
Hodell Chain Co., Cleveland.
McKay Co., Pittsburgh.
Russell Mfg. Co., Inc., John M., Naugatuck, Conn.
Turner & Seymour Mfg. Co., Torrington, Conn.
• United States Register Co., Battle Creek, Mich.

CHAMBERS, COMBUSTION, PREFORMED

Amerform Corporation, Philadelphia.
American Corporation, Philadelphia.
Boston Machine Works Company, Lynn, Mass. (Insulating brick)
• Certified Furnace Company, St. Paul, Minn (Firebrick).
Chicago Fire Brick Co., Chicago, Ill.
Green Fire Brick Company, A. P., Mexico, Mo. (fire clay, insulating brick)
Harvey, Inc., Sid, Valley Stream, N. Y.
Hasko Utilities Company, New York City. (Refractory)
Insulation & Refractories Co., Williamson, N. Y. (Refractory concrete & insulating refractory)
Laclede-Christy Clay Products Company, St. Louis, Mo.
McLeod & Henry Co., Inc., Troy, N. Y.
Mechanical Products Company, Seattle, Wash. (Stainless).
• Monogram Products Co., Philadelphia, Penn. (Insulating refractory)
Munn and Steele, Inc., Newark, N. J. (Light fired refractory).
National Airoil Burner Company, Inc., Philadelphia (Fire clay—burned).
Oil Equipment Mfg. Co., New Haven, Conn. (Inconel)
Peterson Co., B. A., Dowagiac, Mich.
Preferred Utilities Manufacturing Corp., New York City.
Red Wing Oil Burner Co., Inc., Chelsea, Mass. (Light weight refractory)
Refractory & Insulation Corporation, New York, N. Y. (Refractory)
Rehm, R., St. Albans, N. Y. (Radiant silicons)
• Rex Clay Products, Detroit, Mich.
Robinson Insulation Co., Great Falls, Mont.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Stefco Steel Company, Michigan City, Ind. (Stainless steel)
Universal Zonolite Insulation Co., Chicago (Vermiculite concrete).
Walsh Refractories Corp., St. Louis, Mo. (Refractory)
Webber Co., A. R., New Haven, Conn.

CHANNELS

See Angles, Bars, Beams, Channels and Tees (Light Weight Shapes)

CHEMICALS, RUST PREVENTIVE

American Chemical Paint Co., Ambler, Pa.
Carbide & Carbon Chemicals Corp., New York, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Industrial Service Laboratories, Milwaukee.
Klem Chemicals, Inc., Dearborn, Mich.
Nelson Chemical Co., Detroit.
North American Fibre Products Co., Cleveland.
Oakite Products, Inc., New York City.
Parker Rust-Proof Co., Detroit.
Pennsylvania Refining Co., Ohio Div., Cleveland, Ohio.
Pennsylvania Salt Mfg. Co., Philadelphia.
Protective Coatings, Inc., Detroit, Mich. (Remover)
Rossaul Co., New York, N. Y.
Sudbury Laboratory, South Sudbury, Mass.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Truscon Laboratories, Detroit, Mich.
Western Reserve Laboratories, Cleveland, Ohio.

CHIMNEY CAPS

See Caps and Tops, Chimney

CHIMNEY LININGS

See Linings, Chimney

CHIMNEYS, PREFABRICATED

• Condensation Engineering Corp., Chicago, Ill. (Vitreous enamel)
• Van-Packer Corp., Chicago, Ill.

CLEANERS, POLISHERS AND FINISHERS, METAL

• Allen Co., L. B., Inc., Chicago, Ill. (Stainless steel, monel)
American Chemical Paint Co., Ambler, Pa.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (All metals)
Klem Chemicals, Inc., Dearborn, Mich.
Nu Steel Company, Chicago, Ill. (Aluminum & stainless steel)
Oakite Products, Inc., New York City.
Parker Rust-Proof Co., Detroit, Mich.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Pennsylvania Salt Mfg. Co., Philadelphia.
Protective Coatings, Inc., Detroit.
Rossaul Co., New York, N. Y.
Standard Steel Spring Co., Gary, Ind.
Tamms Industries Inc., Chicago, Ill.
Truscon Laboratories, Detroit.
Turco Products, Inc., Los Angeles.
Western Reserve Laboratories, Cleveland.
Wolfe-Kote Co., Sheboygan, Wis. (Liquid).

CLEANERS, VACUUM, FURNACE

Baker Furnace & Cleaner Mfg. Co., Toledo, O.
Black & Decker Mfg. Co., Towson, Md.
• Breuer Electric Mfg. Co., Chicago.
• Doyle Vacuum Cleaner Co., Grand Rapids, Mich.
General Blower Co., Morton Grove, Ill.
General Electric Co., Bridgeport, Conn.
Ideal Industries, Inc., Sycamore, Ill.
• Kent Co., Inc., Rome, N. Y.
Molloy Sales Corp., Chicago, Ill.
• National Super Service Co., Inc., Toledo, Ohio.
Spencer Turbine Co., Hartford, Conn.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.

CLEAT BENDERS

See Machines, Cleat Bending

CLEATS, DRIVE

See Connectors, Metal

CLIPS, FASTENING, ROOFING

Bard Manufacturing Co., Bryan, Ohio.
• Berger Brothers Co., Philadelphia.
Bridesburg Foundry Co., Philadelphia.
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Edwards Mfg. Co., Inc., Cincinnati.
• Inland Steel Products Company, Milwaukee.
Lexington Supply Co., Cleveland, Ohio.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Wiley Manufacturing Co., Detroit.

CLIPS AND TIPS, DAMPER

• Adams Company, The, Dubuque, Iowa.
• Air Control Products, Inc., Coopersville, Mich.
• Berger Bros. Co., Philadelphia.
• Gerett Corp., M. A., Milwaukee, Wis.
• Gosse Mfg. Co., Milwaukee, Wis.
Griswold Mfg. Co., Erie, Pa.
• Hart & Cooley Mfg. Co., Holland, Mich.
Howes-Woods Company, Cambridge, Mass.
Kerentoff, G. L., Cincinnati.
• Mueller Furnace Co., L. J., Milwaukee.
• United States Register Co., Battle Creek, Mich.
Young Regulator Co., Cleveland.

CO_2 ANALYZERS

See Analyzers, CO_2

COAL BURNERS, AUTOMATIC

See Stokers

COILS

Cooling, Direct Expansion, Finned

Acme Industries, Inc., Jackson, Mich.
• Aerofin Corp., Syracuse, N. Y.
• Airtemp Division, Chrysler Corp., Dayton, O.
American Blower Corporation, Detroit.
American Coils, Inc., Newark, N. J.
Beacon-Morris Corp., Boston, Mass.
Betz Corporation, Hammond, Ind.
Bohn Aluminum & Brass, Detroit.
Bush Mfg. Co., West Hartford, Conn.
Conditionaire Unit Co., Chicago.
Doyle & Roth Mfg. Co., Long Island City, N. Y.
Drayer-Hanson, Inc., Los Angeles.
Frick Co., Waynesboro, Penn.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
G & O Mfg. Co., New Haven, Conn.
General Electric Co., Bloomfield, N. J.
General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Griscom-Russell Co., The, New York City.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Howe Ice Machine Co., Chicago, Ill.
Ice Air Conditioning Co., Inc., Brooklyn.
Kauffman Air Conditioning Corp., St. Louis.
Kennard Corporation, St. Louis.
Kennedy, Inc., David E., Brooklyn, N. Y.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
McCord Corporation, Detroit.
McQuay, Inc., Minneapolis.
Manufacturer's Fin Coil Co., Chicago.
Mario Coil Co., St. Louis.
Mitchell & Co., Inc., W. K., Philadelphia.
Modine Mfg. Co., Racine, Wis.
Murray Mfg. Co., D. J., Wausau, Wis.
Pedrick Tool & Machine Co., Philadelphia, Penn.
Peerless of America, Inc., Chicago.
Refrigeration Appliances, Inc., Chicago.
Refrigeration Economics Co., Inc., Canton, O.
Rempe Co., Chicago.
Roessing Mfg. Co., Sharpsburg Sta., Pittsburgh.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis, Minn.
Tenney Engineering, Inc., Newark, N. J.
Trane Co., LaCrosse, Wis.
• United States Air Conditioning Corp., Minneapolis.
Vilter Mfg. Co., Milwaukee.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

Cooling, Water

Acme Industries, Inc., Jackson, Mich.
• Aerofin Corp., Syracuse, N. Y.
• Airtemp Division, Chrysler Corp., Dayton, O.
Beacon-Morris Corp., Boston.
Bell & Gossett Co., Morton Grove, Ill.
Bohn Aluminum & Brass, Detroit.
Bush Mfg. Co., West Hartford, Conn.
Campbell Heating Co., E. K., Kansas City.
Chicago Fan & Fin Coil Co., Chicago.
Conditionaire Unit Company, Chicago.
Doyle & Roth Mfg. Co., Long Island City, N. Y.
Drayer-Hanson, Inc., Los Angeles.
Frick Co., Waynesboro, Penn.
Frigidaire Division, General Motors Corporation, Dayton, O.
G & O Mfg. Co., New Haven, Conn.
General Electric Co., Bloomfield, N. J.
General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Griscom-Russell Co., The, New York City.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Howe Ice Machine Co., Chicago, Ill.
Ice Air Conditioning Co., Inc., Brooklyn.
Industrial Mfg. & Eng. Co., Chicago.
Kauffman Air Conditioning Corp., St. Louis.
Kennard Corporation, St. Louis.
Kennedy, Inc., David E., Brooklyn, N. Y.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
McCord Corporation, Detroit.
McQuay, Inc., Minneapolis.
Manufacturer's Fin Coil Co., Chicago.
Mario Coil Co., St. Louis.
Modine Mfg. Co., Racine, Wis.
Murray Mfg. Co., D. J., Wausau, Wis.
National Pipe Bending Co., New Haven, Conn.
Nesbitt, Inc., John J., Philadelphia.
• Palmer Manufacturing Corp., Phoenix, Ariz.
Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
Pedrick Tool & Machine Co., Philadelphia, Penn.
Peerless of America, Inc., Chicago.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, O.
Rempe Co., Chicago.
Roessing Mfg. Co., Sharpsburg Sta., Pittsburgh.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis.
Tenney Engineering, Inc., Newark, N. J.
Trane Co., La Crosse, Wis.
• United States Air Conditioning Corporation, Minneapolis.
Vilter Mfg. Co., Milwaukee.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Whitlock Manufacturing Co., Hartford, Conn.
Wing Manufacturing Co., L. J., New York City.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

Heating

• Aerofin Corp., Syracuse, N. Y.
• Airtherm Manufacturing Company, St. Louis.
American Blower Corporation, Detroit.
American Coils, Inc., Newark, N. J.
• Bayley Blower Co., Milwaukee.
Beacon-Morris Corporation, Boston.
Bohn Aluminum & Brass, Detroit.
Bush Mfg. Co., West Hartford, Conn.
Campbell Heating Co., E. K., Kansas City, Mo.
Chicago Fan & Fin Coil Co., Chicago.

• Advertisement in this issue. See Index to Advertisers, page 88-D.

Conditionaire Unit Company, Chicago.
Doyle & Roth Mfg. Co., Long Island City, N. Y.
Drayer-Hanson, Inc., Los Angeles.
G & O Mfg. Co., New Haven, Conn.
General Electric Co., Bloomfield, N. J.
Griscom-Russell Co., New York City.
Ice Air Conditioning Co., Inc., Brooklyn.
Industrial Mfg. & Eng. Co., Chicago.
Kauffman Air Conditioning Corp., St. Louis.
Kennard Corporation, St. Louis.
Kennedy, Inc., David E., Brooklyn, N. Y.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
McCord Corporation, Detroit.
McQuay, Inc., Minneapolis.
Manufacturer's Fin Coil Co., Chicago.
Marlo Coil Co., St. Louis.
Modine Mfg. Co., Racine, Wis.
Murray Mfg. Co., D. J., Wausau, Wis.
Nesbitt, Inc., John J., Philadelphia.
New York Blower Co., Chicago.
Peerless of America, Inc., Chicago.
Refrigeration Appliances, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, Ohio.
Rempe Co., Chicago.
Roessing Manufacturing Co., Pittsburgh.
Rome-Turney Radiator Co., Rome, N. Y.
Standard Heater and Oil Equipment Co., Jersey City, N. J.
Super Radiator Corp., Minneapolis.
Tenney Engineering, Inc., Newark, N. J.
Trane Co., La Crosse, Wis.
• United States Air Conditioning Corporation, Minneapolis.
Vulcan Radiator Co., Hartford, Conn.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Whitlock Mfg. Co., Hartford, Conn.
Wing Mfg. Co., L. J., New York City.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

COILS, FIRE POT, DOMESTIC HOT WATER

• Adams Company, The, Dubuque, Iowa.
• Air Controls, Inc., Cleveland.
• Dowagiac Steel Furnace Co., Dowagiac, Mich.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
Globe Machinery & Supply Co., Des Moines, Ia.
Harvey-Whipple, Inc., Springfield, Mass.
Lennox Furnace Co., Marshalltown, Ia.
Marshall Furnace Co., Marshall, Mich.
• Mueller Furnace Co., L. J., Milwaukee.
Rempe Co., Chicago.

COLLECTORS, BLOW PIPE

Aerotec Corp., Greenwich, Conn.
Aget-Detroit Co., Ann Arbor, Mich.
Allen Billmyre Div. Lamson Corp., Syracuse, N. Y.
American Air Filter Co., Inc., Louisville, Ky.
American Blower Corp., Detroit.
American Metal Products Co., Fort Worth, Texas.
Blower Application Co., Milwaukee.
• Buffalo Forge Co., Buffalo.
Centri-Spray Co., Detroit.
Chicago Blower Corporation, Chicago.
Day Co., Minneapolis.
Dust Suppression & Engineering Co., Lake Orion, Mich.
Goergen-Mackwirth Engineering Company, Buffalo. (Rarified and Cyclone)
Goethel Sheet Metal Works, Inc., Alfred, Milwaukee.
• Kirk & Blum Mfg. Co., Cincinnati.
Knickerbocker Co., Jackson, Mich.
Kopperman & Sons, Joseph, Philadelphia.
Litman, Morris, Springfield, Mass.
Lunn Co., A. H., Toledo, Ohio.
Newcomb-Detroit Co., Detroit, Mich.
Northern Blower Co., Cleveland.
Pangborn Corp., Hagerstown, Md.
Peters-Dalton, Inc., Detroit.
Prat-Daniel Corp., East Port Chester, Conn.
Puhl & Hepper Mfg. Co., Inc., St. Louis.
Ruemelin Mfg. Co., Milwaukee.
Schmieg Industries, Detroit.
Schnell-le Co., Claude B., Detroit.
Skinner Heating & Vent Co., Heater Div. of St. Louis Blow Pipe & Heater Co., Inc., St. Louis.
Sly Mfg. Co., W. W., Cleveland.
Stranwitz & Co., Inc., W. J., Camden, N. J.
Torit Manufacturing Co., St. Paul, Minn.
Western Blower Co., Seattle, Wash.
Western Precipitation Corp., Los Angeles.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Winkler & Sons, Inc., A. E., Milwaukee.
Young & Bertke Co., Cincinnati.

COMBUSTION CHAMBERS

See Chambers, Combustion, Preformed; Baffles, Combustion Chambers, Oil Burner and Stoker

COMBUSTION CONTROLS

See Controls; Dampers, Draft

COMPOUNDS, AIR FRESHENING

Airkem, Inc., New York City.
Carbide & Carbon Chemicals Corp., New York, N. Y.
Lundy Mfg. Corp., Long Island City, N. Y.

COMPOUNDS, CAULKING

Acme Refining Co., Cleveland.
Allmetal Weatherstrip Co., Chicago.
American Fluresit Co., Cincinnati, Ohio.
American-Marietta Company, Chicago.
• Armstrong Co., Detroit.
Babbitt Chemical Specialties Co., New York City.
Baer Brothers, New York, N. Y.
Blue Ridge Talc Co., Inc., Henry, Va.
Calbar Paint & Varnish Co., Philadelphia, Penn. (Also caulking guns)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Colored)
Carter Paint Co., Liberty, Ind.
Chamberlin Company of America, Detroit.
Cheesman-Elliot Company, Inc., Brooklyn.
Continental Products Co., Euclid, O.
Eagle-Picher Co., Cincinnati, O.
Ford Roofing Products Co., Chicago.
Glidden Company, Cleveland.
Goodrich Co., B. F., Akron, O.
Hercules Chemical Co., Inc., New York, N. Y.
Hetzel Roofing Products Co., Newark, N. J.
Horn Co., Inc., A. C., Long Island City, N. Y.
Iowa Paint Mfg. Co., Des Moines, Ia.
Irvington Varnish & Insulator Co., Irvington, N. J.
Johns-Manville, New York City.
Lastik Products Co., Inc., Pittsburgh.
Lehon Company, Chicago.
Metropolitan Refining Co. Inc., Long Island City, N. Y.
Midland Paint & Varnish Co., Cleveland.
Mortell Co., J. W., Kankakee, Ill.
National Mfg. Corp., Tonawanda, N. Y.
Nebel Manufacturing Co., Cleveland.
North American Fibre Products Co., Cleveland.
Ohmiac Paint & Refining Co., Chicago (Asphalt).
Pecora Paint Co., Philadelphia.
Pittsburgh Plate Glass Co., Pittsburgh.
Plastic Products Co., Detroit.
Presstite Engineering Co., St. Louis.
Quigley Company, Inc., New York City.
Radiator Specialty Co., Charlotte, N. C.
Robertson Co., H. H., Pittsburgh, Pa.
Sherwin-Williams Co., Cleveland.
Sipe & Company, James B., Pittsburgh.
Smooth-on Mfg. Co., Jersey City, N. J.
Sonneborn Sons, Inc., L., New York City.
Southport Paint Company, Savannah, Ga.
Tamms Industries Inc., Chicago, Ill.
Thompson & Co., Oakmont (Pittsburgh Dist.), Pa.
Tropical Paint & Oil Co., Cleveland.
Truscon Laboratories, Detroit, Mich.
X-Pando Corp., Long Island City, N. Y.
Yardley Venetian Blind Co., Columbus, Ohio.

COMPOUNDS, CLEANING, AIR FILTER

Carolina Aniline & Extract Co., Inc., Charlotte, N. C. (Humidifying systems).
Oakite Products, Inc., New York City.
Turco Products, Inc., Los Angeles.

COMPRESSORS, REFRIGERATING

• Airtemp Division, Chrysler Corp., Dayton, O.
Baker Ice Machine Co., Inc., South Windham, Me.
Brunner Mfg. Co., Utica, N. Y.
Carrier Corp., Syracuse, N. Y.
Copeland Refrigeration Corp., Sidney, Ohio.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis.
Dicoler Div. General Machine & Mfg. Co., Berwick, Penn.
Frick Co., Waynesboro, Pa.
Frigidaire Division, General Motors Corporation, Dayton, O.
General Electric Co., Bloomfield, N. J.
General Machinery Co., Spokane, Wash. (Ammonia).
General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Howe Ice Machine Co., Chicago.
Kauffman Air Conditioning Corp., St. Louis.
Lehigh Mfg. Co., Lancaster, Penn.
Lynch Corp., Toledo, Ohio.
Mills Novelty Co., Chicago.
Reynolds Manufacturing Co., Springfield, Mo.
Servel, Inc., Evansville, Ind.
Tecumseh Products Co., Tecumseh, Mich.
Trane Co., LaCrosse, Wis.
Universal Cooler Div., Marion, Ohio.
Vilter Mfg. Co., Milwaukee.

• Advertisement in this issue. See Index to Advertisers, page 93-D.

Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Worthington Pump & Machinery Corp., Harrison, N. J.
Yeomans Brothers Co., Chicago.
York Corp., York, Pa.

CONDUCTOR PIPE AND FITTINGS

See Pipe, Conductor; Fittings and Accessories, Conductor

CONNECTIONS, DUCT, FLEXIBLE

American Ventilating Hose Co., New York City.
Armstrong Cork Co., Lancaster, Penn.
• Bauer & Black Div. Kendall Co., Chicago, Ill. (Polyken industrial tape)
Chicago Metal Hose Corp., Maywood, Ill.
Corbman Bros., Inc., Philadelphia, Penn.
Felters Co., Inc., Boston, Mass.
Flexible Tubing Corp., Branford, Conn.
Iden Co., Chicago, Ill.
St. Clair Rubber Co., Marysville, Mich. (Fiberglas)
United States Rubber Co., New York City.
Wagner Awning & Manufacturing Company, Cleveland.
• Wilson, Inc., Grant, Chicago (Asbestos).
Wiremold Co., Hartford, Conn.

CONNECTORS, METAL, FOR METAL DUCTS

• Acme Manufacturing Co., Philadelphia, Penn.
• Char-Gale Mfg. Co., Minneapolis.
Corbman Bros., Inc., Philadelphia.
• Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
• Waterman-Waterbury Co., Minneapolis.

CONTROLS

Blower, Speed Changing

• Automatic Products Co., Milwaukee, Wis.
Webster Electric Co., Racine, Wis. (Thermal).
• White Manufacturing Co., St. Paul (Thermal).

Combination Fan and Limit, Line or Low Voltage

• Automatic Products Co., Milwaukee, Wis.
Cam-Stat, Inc., Los Angeles, Calif.
Cook Electric Co., Chicago.
Criss Mfg. Co., Columbus, Ohio.
Defender Instrument and Regulator Co., St. Louis.
Detroit Lubricator Co., Detroit.
• General Controls Co., Glendale, Cal.
Iron Fireman Mfg. Co., Cleveland, Ohio.
• Mercoid Corp., Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corporation, Milwaukee.
• Sampsel Time Control, Inc., Spring Valley, Ill.
• Standard Remote Control Valve Company, South Pasadena, Cal.
• White Manufacturing Co., St. Paul, Minn.
• White-Rodgers Electric Co., St. Louis.

Combustion, Line or Low Voltage

• Barber-Colman Co., Rockford, Ill.
Combustion Control Corp., Cambridge, Mass.
Crown Controls Co., Inc., New Bremen, Ohio.
Electronic Products Company, St. Charles, Ill. (Industrial)
• General Controls Co., Glendale, Calif.
Hays Corp., Michigan City, Ind.
Hotstream Heater Co., Cleveland.
Iron Fireman Mfg. Co., Cleveland, Ohio.
• Mercoid Corporation, Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind. (Low).
• Perfex Corporation, Milwaukee.
• Sampsel Time Control, Inc., Spring Valley, Ill.
• White-Rodgers Electric Co., St. Louis, Mo.

Fan

Allen-Bradley Co., Milwaukee.
Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
• Barber-Colman Co., Rockford, Ill.
Cam-Stat, Incorporated, Los Angeles.
Clark Controller Co., Cleveland.
Criss Mfg. Co., Columbus, Ohio.
Detroit Lubricator Co., Detroit.
• General Controls Co., Glendale, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif. (Low).
• Mercoid Corporation, Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corporation, Milwaukee.
• Sampsel Time Control, Inc., Spring Valley, Ill.
Saroo Co., Inc., New York City.
Spencer Thermostat Div. Unit of Metals & Controls Corp., Attleboro, Mass.
United Electric Controls Co., South Boston, Mass.
• White Manufacturing Co., St. Paul, Minn. (Low).
• White-Rodgers Electric Co., St. Louis.

Humidistats

Au-Temp-Co., Corp., New York City.
• Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
Friez Instrument Div., Baltimore, Md.
• General Controls Co., Glendale, Calif.
H-B Instrument Co., Inc., Philadelphia, Pa.
Johnson Service Co., Milwaukee, Wis. (Wood, Hair, Membrane)
• Minneapolis-Honeywell Regulator Co., Minneapolis (Human hair)
• Penn Electric Switch Co., Goshen, Ind.
Tagliabue Corp. (N. J.), C. J., Newark, N. J.
Taylor Instrument Companies, Rochester, N. Y.

Limit, Line or Low Voltage

Allen-Bradley Co., Milwaukee. (Low).
Au-Temp-Co Corporation, New York City.
Cam-Stat, Incorporated, Los Angeles.
Criss Mfg. Co., Columbus, Ohio. (Low)
Crown Controls Co., Inc., New Bremen, Ohio. (Low)
Detroit Lubricator Co., Detroit.
• General Controls Co., Glendale, Calif.
• General Electric Co., Schenectady, N. Y.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif. (Low).
• Mercoid Corporation, Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Mueller Furnace Co., L. J., Milwaukee, Wis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corporation, Milwaukee.
• Sampsel Time Control, Inc., Spring Valley, Ill.
Saroo Co., Inc., New York City.
Spencer Thermostat Div. Unit of Metals & Controls Corp., Attleboro, Mass.
United Electric Controls Co., South Boston, Mass.
• White Manufacturing Co., St. Paul, Minn.
• White-Rodgers Electric Co., St. Louis.

Motors, Duct Damper, Modulating or Proportioning

Automatic Temperature Control Co., Inc., Philadelphia.
• Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
• General Blower Co. Inc., Philadelphia, Penn.
Hotstream Heater Co., Cleveland.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• White Manufacturing Co., St. Paul, Minn.

Motors, Duct Damper, Two Position

Au-Temp-Co Corp., New York City.
• Automatic Products Co., Milwaukee.
Automatic Temperature Control Co., Inc., Philadelphia.
• Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
Crown Controls Co., Inc., New Bremen, Ohio.
• General Blower Co. Inc., Philadelphia, Penn.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corporation, Milwaukee.
Sampsel Time Control, Inc., Spring Valley, Ill.
• White Manufacturing Co., St. Paul, Minn.

Motors, Draft Damper, Electrical

Au-Temp-Co Corp., New York City.
• Automatic Products Co., Milwaukee.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
• Barber-Colman Co., Rockford, Ill.
Criss Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
Defender Instrument & Regulator Co., St. Louis.
• General Blower Co. Inc., Philadelphia, Penn.
• Mercoid Corporation, Chicago, Ill.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corporation, Milwaukee.
Sampsel Time Control, Inc., Spring Valley, Ill.
• White Manufacturing Co., St. Paul, Minn.
• White-Rodgers Electric Co., St. Louis.

Pilots, Gas Burner

Ajax Thermostatic Controls Co., Gates Mills, Ohio.
American Control Company, Compton, Calif.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

- Automatic Products Co., Milwaukee, Wis.
Barcafer Mfg. Co., Salina, Kansas.
Cleveland Heater Co., Cleveland, Ohio.
Continental Instrument Co., Cleveland.
Detroit Lubricator Co., Detroit.
Domestic Thermostat Co., Los Angeles.
- General Controls Co., Glendale, Calif.
Grayson Controls Div., Robertshaw-Fulton Controls Co., Lynwood, Cal.
Grayson-Greenamyer, Inc., Monrovia, Calif.
Jae Manufacturing Co., Mt. Clemens, Mich.
Kathe Controls, Cleveland.
- Mercoid Corporation, Chicago.
Milwaukee Gas Specialty Co., Milwaukee.
- Minneapolis-Honeywell Regulator Co., Minneapolis.
Modern Materials, Inc., Chicago, Ill.
Newell & Sons, Irwin, Pa.
Patrol Valve Co., Cleveland, Ohio. (Also gas pilot filters)
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
Roberts-Gordon Appliance Corp., Buffalo.
Robertshaw-Fulton Controls Co., Youngwood, Pa.
- Standard Remote Control Valve Co., Inc., South Pasadena, Calif.
Titan Valve & Mfg. Co., Cleveland.
- White-Rodgers Electric Co., St. Louis
- Zink Co., John, Tulsa, Okla.

Relays, Electrical

Allen-Bradley Co., Milwaukee.
American Instrument Co., Silver Spring, Md.
Arrow-Hart & Hegeman Elect. Co., Hartford, Conn.
Au-Temp-Co Corp., New York City.
Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Switch Co., Orange, N. J.
Automatic Temperature Control Co., Inc., Philadelphia.
B/W Controller Corp., Birmingham, Mich. (Floatless)
- Barber-Colman Co., Rockford, Ill.
Benjamin Elec. Mfg. Co., Des Plaines, Ill.
Clark Controller Co., Cleveland.
Cooper Co., Clark, Palmyra, N. J.
Cramer Company, Inc., R. W., Centerbrook, Conn. (Time)
Cutler-Hammer, Inc., Milwaukee.
Detroit Lubricator Co., Detroit.
Durakool, Inc., Elkhart, Ind. (Mercury)
Edison, Inc., Thomas A., Instrument Div., West Orange, N. J.
Electronic Products Co., St. Charles, Ill.
Ess Instrument Co., Fort Lee, N. J.
- General Controls Co., Glendale, Calif.
- General Electric Co., Schenectady, N. Y.
Guardian Electric Mfg. Co., Chicago.
H-B Instrument Co., Philadelphia, Penn.
Industrial Engineering Corp., Terre Haute, Ind.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif.
- Mercoid Corp., Chicago.
- Minneapolis-Honeywell Regulator Co., Minneapolis.
Monitor Controller Co., Boston, Mass.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee.
Philadelphia Thermometer Co., Philadelphia.
Photoswitch, Inc., Cambridge, Mass.
Precision Thermometer & Instrument Co., Philadelphia.
Reynolds Electric Co., River Grove, Ill.
R-S Products Corp., Philadelphia, Penn.
Sampsel Time Control, Inc., Spring Valley, Ill.
Small Motors, Inc., Chicago.
Square D Co., Detroit.
Struthers-Dunn, Inc., Philadelphia.
Tork Clock Company, Inc., Mount Vernon, N. Y.
Ward Leonard Electric Co., Mt. Vernon, N. Y.
Westinghouse Electric Corporation, Pittsburgh, Pa.
Weston Electrical Instrument Corp., Newark, N. J.
- White-Rodgers Electric Co., St. Louis.
Zenith Electric Co., Chicago.

Switches, Magnetic

Allen-Bradley Co., Milwaukee.
Allis-Chalmers Mfg. Co., Milwaukee.
Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Switch Co., Orange, N. J.
B/W Controller Corp., Birmingham, Mich
- Barber-Colman Co., Rockford, Ill.
Clark Controller Co., Cleveland.
Cutler-Hammer, Inc., Milwaukee.
Detroit Lubricator Co., Detroit.
Electric Controller & Mfg. Co., Cleveland.
- General Controls Co., Glendale, Calif.
- General Electric Co., Schenectady, N. Y.
Guardian Electric Mfg. Co., Chicago.
H-B Instrument Co., Philadelphia, Penn.
Hart Mfg. Co., Hartford, Conn. (Mercury Tube).
Industrial Engineering Corp., Terre Haute, Ind.
- Minneapolis-Honeywell Regulator Co., Minneapolis.
Monitor Controller Co., Boston, Mass.
Palmer Electric Co., Chicago.
- Penn Electric Switch Co., Goshen, Ind.
Square D Co., Detroit.
Struthers-Dunn, Inc., Philadelphia.
Tork Clock Co., Inc., Mt. Vernon, N. Y.
Trumbull Electric Mfg. Co., Plainville, Conn.
Ward Leonard Electric Co., Mt. Vernon, N. Y.
Westinghouse Electric Corporation, Pittsburgh, Pa.
- White-Rodgers Electric Co., St. Louis.
Zenith Electric Co., Chicago.

Switches, Manual

Allen-Bradley Co., Milwaukee.
Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
B/W Controller Corp., Birmingham, Mich.
- Barber-Colman Co., Rockford, Ill.
Clark Controller Co., Cleveland, Ohio.
Cutler-Hammer, Inc., Milwaukee.
Dual Remote Control Co., Garden City, Mich.
Durakool, Inc., Elkhart, Ind. (Mercury).
- General Controls Co., Glendale, Calif.
- General Electric Co., Schenectady, N. Y.
Hart Mfg. Co., Hartford, Conn.
Industrial Engineering Corp., Terre Haute, Ind.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Square D Co., Detroit.
Trumbull Electric Mfg. Co., Plainville, Conn.
Ward Leonard Electric Co., Mount Vernon, N. Y.
Westinghouse Electric Corporation, Pittsburgh, Pa.

Switches, Time

Allen-Bradley Company, Milwaukee.
Au-Temp-Co. Corp., New York City.
Automatic Devices Co., Inc., Weather Controls Div., Chicago, Ill.
Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Temperature Control Co., Inc., Philadelphia.
- Barber-Colman Co., Rockford, Ill.
Cooper Co., Clark, Palmyra, N. J.
Cramer Company, Inc., R. W., Centerbrook, Conn.
Edison, Inc., Thomas A., Instrument Div., West Orange, N. J.
- General Controls Co., Glendale, Calif.
- General Electric Co., Schenectady, N. Y.
Industrial Engineering Corp., Terre Haute, Ind.
International Register Co., Chicago.
Landis & Gyr, Inc., New York City.
- Mercoid Corp., Chicago.
Miller-Harris Instrument Co., Milwaukee.
- Minneapolis-Honeywell Regulator Co., Minneapolis.
Palo-Myers, Inc., New York City.
Paragon Electric Co., Two Rivers, Wis.
- Perfex Corp., Milwaukee.
Photoswitch, Inc., Cambridge, Mass.
Reliance Automatic Lighting Co., Racine, Wis.
Reynolds Electric Co., River Grove, Ill.
Rhodes, Inc., M. H., Hartford, Conn.
Sampsel Time Control, Inc., Spring Valley, Ill.
Sangamo Electric Co., Springfield, Ill.
Telechron, Inc., Ashland, Mass.
Tork Clock Co., Inc., Mt. Vernon, N. Y.
Ward Leonard Electric Co., Mt. Vernon, N. Y.
Westinghouse Electric Corporation, Pittsburgh, Pa.
- White-Rodgers Electric Co., St. Louis.
Zenith Electric Company, Chicago.

Thermostats, Clock, Day and Night

- Barber-Colman Co., Rockford, Ill.
Crown Controls Co., Inc., New Bremen, Ohio.
Detroit Lubricator Co., Detroit.
- General Controls Co., Glendale, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
- Mercoid Corporation, Chicago.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee.
Sampsel Time Control, Inc., Spring Valley, Ill.
Sarcotherm Controls, Inc., New York City.
Tork Clock Co., Inc., Mt. Vernon, N. Y.
- White-Rodgers Electric Co., St. Louis.

Thermostats, Domestic Water Heater

Ajax Thermostatic Controls Co., Gates Mills, Ohio.
American Control Co., Compton, Calif.
American Instrument Co., Silver Spring, Md.
Cam-Stat Inc., Los Angeles, Calif.
Cleveland Heater Co., Cleveland, Ohio.
Cutler-Hammer, Inc., Milwaukee, Wis.
Domestic Thermostat Co., Los Angeles, Calif.
- General Controls Co., Glendale, Calif.
Hart Mfg. Co., Hartford, Conn.
Iron Fireman Mfg. Co., Cleveland, Ohio.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corp., Milwaukee, Wis.
Schaefer Electrical Products Company, Detroit.
Westinghouse Electric Corporation, Pittsburgh.

• Advertisement in this issue. See Index to Advertisers, page 93-D.

Thermostats, Heat Accelerated or Anticipating

Au-Temp-Co Corp., New York City.
• Automatic Products Co., Milwaukee.
• Barber-Colman Co., Rockford, Ill.
Crise Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
Detroit Lubricator Co., Detroit.
Fulton Sylphon Co., Knoxville, Tenn.
• General Controls Co., Glendale, Calif.
H-B Instrument Co., Philadelphia, Penn.
Iron Fireman Mfg. Co., Cleveland, Ohio.
• McLarty Systems, Battle Creek, Mich.
• Mercoid Corporation, Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corp., Milwaukee.
Sarcotherm Controls, Inc., New York City.
Tagliabue Corp. (N. J.), C. J., Newark, N. J.
• White-Rodgers Electric Co., St. Louis.

Thermostats, Line or Low Voltage

American Instrument Co., Silver Spring, Md.
Au-Tem-Co Corp., New York City.
• Automatic Products Co., Milwaukee. (Low)
• Barber-Colman Co., Rockford, Ill.
Cam-StaT Incorporated, Div. Paul Henry Co., Los Angeles.
Crise Mfg. Co., Columbus, O. (Low)
Crown Controls Company, New Bremen, Ohio. (Low)
Detroit Lubricator Co., Detroit.
Edison, Inc., Thomas A., Instrument Div., West Orange, N. J.
• General Controls Co., Glendale, Calif.
H-B Instrument Co., Philadelphia, Penn.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif. (Low)
• Mercoid Corporation, Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corp., Milwaukee.
Sampsel Time Control, Inc., Spring Valley, Ill.
Sarco Company, Inc., New York City.
Sarcotherm Controls, Inc., New York City.
Spencer Thermostat Div. Unit of Metals & Controls Corp., Attleboro, Mass.
• Standard Remote Control Valve Company, South Pasadena, Calif. (Low)
United Electric Controls Co., South Boston, Mass.
• White Manufacturing Co., St. Paul, Minn. (Low)
• White-Rodgers Electric Co., St. Louis.

Thermostats, Modulating or Proportioning

Atlas Valve Company, Newark, N. J. (Pneumatic)
• Barber-Colman Co., Rockford, Ill.
Defender Instrument & Regulator Co., St. Louis.
Johnson Service Company, Milwaukee.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
Tagliabue Corp. (N. J.), C. J., Newark, N. J.
• White Manufacturing Co., St. Paul, Minn.
• White-Rodgers Electric Company, St. Louis.

Thermostats, Weather Compensating

Au-Temp-Co Corp., New York City.
Automatic Devices Co., Inc., Weather Controls Div., Chicago, Ill.
• Barber-Colman Co., Rockford, Ill.
Detroit Lubricator Co., Detroit.
Heat-Timer Corp., New York City.
Illinois Engineering Co., Chicago.
Johnson Service Co., Milwaukee.
Marsh Heating Equipment Co., Skokie, Ill.
Miller Heat-O-Meter Co., Milwaukee.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
Sarco Co., Inc., New York City.
Sarcotherm Controls, Inc., New York City.
United Electric Controls Co., South Boston, Mass.
• White-Rodgers Electric Co., St. Louis, Mo.

Valves, Solenoid

Alco Valve Co., St. Louis.
• Automatic Products Co., Milwaukee.
Automatic Switch Co., Orange, N. J.
• Barber-Colman Co., Rockford, Ill.
Cooper Co., Clark, Palmyra, N. J.
Cutler-Hammer, Inc., Milwaukee.
Davis Regulator Co., Chicago.
Detroit Lubricator Co., Detroit.
Electrimatic Division, The Simonis Co., Chicago.
Frick Co., Waynesboro, Penn.
• General Controls Co., Glendale, Calif. (Magnetic)
Golden-Anderson Valve Specialty Co., Pittsburgh, Pa.
Hays Manufacturing Co., Erie, Pa.
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Hubbell Corp., Chicago.
Keckley Co., O. C., Chicago, Ill.
McDonnell & Miller, Inc., Chicago.
• Maid-O'-Mist, Inc., Chicago, Ill.
• Mercoid Corp., Chicago.
Milwaukee Gas Specialty Company, Milwaukee.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
Pfening Co., Fred D., Columbus, O.
R-S Products Corporation, Philadelphia.
Ruggles-Klingemann Mfg. Co., Salem, Mass.
Sarco Co., Inc., New York City.
Sarcotherm Controls, Inc., New York City.
Sciaky Bros., Inc., Chicago.
Skinner Electric Valve Div., Norwalk, Conn.
Sporlan Valve Co., St. Louis.
Square D Company, Detroit.
Supreme Electric Products Corp., Rochester, N. Y.
• White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS

Gas Burner, Complete Assembly

Detroit Lubricator Co., Detroit, Mich.
• General Controls Co., Glendale, Calif.
Hays Corp., Michigan City, Ind.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corp., Milwaukee, Wis.
• White-Rodgers Electric Co., St. Louis.

Gravity Furnace, Hand-Fired, Complete Assembly

• Automatic Products Co., Milwaukee.
• Barber-Colman Co., Rockford, Ill.
Crise Mfg. Co., Columbus, Ohio.
Crown Controls Co., New Bremen, Ohio.
Defender Instrument and Regulator Co., St. Louis.
• Field Control Div., H. D. Conkey & Co., Mendota, Ill.
• General Controls Co., Glendale, Calif.
• Mercoid Corp., Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corporation, Milwaukee.
Sampsel Time Control, Inc., Spring Valley, Ill.
• White Manufacturing Co., St. Paul, Minn.
• White-Rodgers Electric Co., St. Louis.

Heating, Ventilating, and Air Conditioning Systems, Electrical

• Barber-Colman Co., Rockford, Ill.
Fulton Sylphon Co., Knoxville, Tenn.
• General Controls Co., Glendale, Calif.
Midwest Automatic Control Co., Des Moines, Iowa.
• Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
• White-Rodgers Electric Co., St. Louis, Mo.

Heating, Ventilating and Air Conditioning Systems, Pneumatic

Atlas Valve Co., Newark, N. J.
Bristol Co., Waterbury, Conn.
Foxboro Co., Foxboro, Mass.
Johnson Service Co., Milwaukee.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
Powers Regulator Co., Chicago.
Tagliabue Corp. (N. J.), C. J., Newark, N. J.
Taylor Instrument Companies, Rochester, N. Y.

Oil Burner, Complete Assembly

• Automatic Products Co., Milwaukee.
Defender Instrument and Regulator Co., St. Louis.
Detroit Lubricator Co., Detroit, Mich.
• General Controls Co., Glendale, Cal.
Hays Corp., Michigan City, Ind.
• Mercoid Corporation, Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corporation, Milwaukee.
Wheelco Instruments Co., Chicago.
• White-Rodgers Electric Co., St. Louis, Mo.

Stoker, Complete Assembly

Defender Instrument and Regulator Co., St. Louis.
Detroit Lubricator Co., Detroit.
Hays Corporation, Michigan City, Ind.
• Mercoid Corporation, Chicago, Ill.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
Palmer Electric Co., Chicago.
• Penn Electric Switch Co., Goshen, Ind.
• Perfex Corporation, Milwaukee.
Sampsel Time Control, Inc., Spring Valley, Ill.
• White-Rodgers Electric Co., St. Louis.

• Advertisement in this issue. See Index to Advertisers, page 93-D.

Water Air Conditioning Furnace, Hand Fired, Complete Assembly

- Barber-Colman Co., Rockford, Ill.
  Crown Controls Co., Inc., New Bremen, Ohio.
- Field Control Div., H. D. Conkey & Co., Mendota, Ill.
- General Controls Co., Glendale, Calif.
- Mercoid Corporation, Chicago.
- Minneapolis- Honeywell Regulator Co., Minneapolis.
- Penn Electric Switch Co., Goshen, Ind.
- Perfex Corporation, Milwaukee.
  Sampsel Time Control, Inc., Spring Valley, Ill.
- White Manufacturing Co., St. Paul, Minn.
- White-Rodgers Electric Co., St. Louis.

Zone, Complete Assembly

Au-Temp-Co Corp., New York City.
- Barber-Colman Co., Rockford, Ill.
- Dole Valve Company, Chicago.
- General Controls Co., Glendale, Cal.
- Mercoid Corp., Chicago.
- Minneapolis-Honeywell Regulator Co., Minneapolis.

COOLING COILS

See Coils, Cooling

COPPERS, SOLDERING

Acme Electric Heating Co., Inc., Boston, Mass. (Electric)
American Brass Co., Waterbury, Conn.
Berns Co., Otto, Rochester, N. Y.
Bomas Mfg. Co., Binghamton, N. Y.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Conklin Brass & Copper Co., Inc., T. E., New York City.
Dual-Heat Iron Co., Los Angeles (Electric).
Dual Remote Control Co., Garden City, Mich. (Electric)
Electric Soldering Iron Co., Inc., Deep River, Conn. (Electric).
Everhot Mfg. Co., Maywood, Ill.
- General Electric Co., Schenectady, N. Y. (Electric).
  Hexacon Electric Co., Roselle Park, N. J. (Electric).
- Hussey & Co., C. G., Pittsburgh.
  Ideal Industries, Inc., Sycamore, Ill.
  Imperial Brass Mfg. Co., Chicago (Air-Acetylene).
  Insto-Gas Corporation, Detroit (Gas).
  Komode Mfg. Co., New York, N. Y. (Cartridge heated)
  Kwikheat Mfg. Co., Glendale, Calif. (Electric)
  Lenk Mfg. Company, Boston (Electric).
  Linde Air Products Co., New York, N. Y.
  Mina-Kota Foundry & Mfg. Co., Fargo, N. Dak.
  Nelpin Manufacturing Co., Long Island City, N. Y. (Feeding attachment)
  Ransome Company, Emeryville, Calif. (Gas).
- Reiner & Campbell Co., Inc., Elizabeth, N. J. (Carbide).
  Sheet Metal Mfg. Co., Inc., Brooklyn.
  Sight Feed Generator Co., West Alexandria, Ohio.
  Stanley Tools, New Britain, Conn.
  Sta-Warm Electric Co., Ravenna, O.
  Torit Manufacturing Co., St. Paul, Minn.
  Turner Brass Works, Sycamore, Ill.
  Vulcan Electric Co., Danvers, Mass. (Electric).
  Wall Chemicals Div., Liquid Carbonic Corp., Chicago.
  Weiss & Co., H., New York City.

CRANES, OVERHEAD TRAVELING, HAND AND POWER

American MonoRail Co., Cleveland.
Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Chicago Tramrail Co., Chicago.
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Cleveland Tramrail Div., Cleveland Crane & Eng. Co., Wickliffe, Ohio.
Detroit Hoist & Machine Co., Detroit.
Euclid Crane & Hoist Co., Euclid, Ohio.
- Field Control Div., H. D. Conkey & Co., Mendota, Ill.
  Harnischfeger Corporation, Milwaukee, Wis. (Electric)
  Louden Machinery Co., Fairfield, Iowa.
  Reading Chain & Block Corp., Reading, Pa.
  Richards-Wilcox Manufacturing Co., Aurora, Ill.
  Robbins & Myers, Inc., Springfield, Ohio.
  Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.
  Whiting Corp., Harvey, Ill.
  Wright Hoist Division, American Chain & Cable Co., York, Penn.

CRIMPING MACHINES

See Machines, Crimping

DAMPER, DUCT, REGULATOR SETS

See Regulators, Duct Damper Sets

DAMPER MOTORS

See Controls, Motors

DAMPERS, BACK DRAFT

See Louvers and Shutters

DAMPERS

Draft, Barometric

Atlas Utilities Co., Inc., Providence, R. I. (Thermostatic).
Atlas Valve Co., Newark, N. J.
- Barber-Colman Co., Rockford, Ill.
  Boston Machine Works Co., Lynn, Mass.
  Breese Burners, Inc., Santa Fe, N. Mex.
  Campbell Engineering Co., Appleton, Wis.
- Cole-Sewell Engineering Co., St. Paul.
  Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
- Empire Ventilation Equipment Co., Long Island City, N. Y.
- Field Control Div., H. D. Conkey & Co., Mendota, Ill.
  Herd Utilities, Inc., Providence, R. I. (Thermostatic).
  Hotstream Heater Co., Cleveland, Ohio.
  James Regulator Co., Inc., Pottsville, Pa.
- Krueger Sentry Gauge Co., Green Bay, Wis.
- Perfex Corporation, Milwaukee.
  Preferred Utilities Mfg. Corp., New York City.
  Simplex Manufacturing Co., Fond du Lac, Wis.
- Skuttle Mfg. Co., Detroit, Mich.
- Walker Mfg. & Sales Corp., St. Joseph, Mo.

Smoke Pipe

- Adams Co., Dubuque, Iowa.
- Char-Gale Mfg., Minneapolis.
  Corbman Bros., Inc., Philadelphia, Penn.
  Eselgroth & Co., Newark, N. J.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
  Griswold Mfg. Co., Erie, Pa.
- Hotstream Heater Co., Cleveland.
  Howes-Woods Company, Cambridge, Mass.
  James Regulator Co., Inc., Pottsville, Pa. (For water heaters).
  Keith Furnace Co., Des Moines, Ia.
  Maple City Furnace Co., Monmouth, Ill.
  Marshall Furnace Co., Marshall, Mich.
- Mueller Furnace Co., L. J., Milwaukee.
- Peerless Foundry Co., Indianapolis, Ind.
  Preferred Utilities Manufacturing Corp., New York City.
  Sheet Metal Mfg. Co., Inc., Brooklyn.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- United States Register Co., Battle Creek, Mich.
- Walker Mfg. & Sales Corp., St. Joseph, Mo.
  Wheeling Corrugating Company, Wheeling, W. Va.
- Williamson Heater Co., Cincinnati.

Stack Head

- Acme Manufacturing Co., Philadelphia, Penn.
- Air Control Products, Inc., Coopersville, Mich.
- Barber-Colman Co., Rockford, Ill.
  Corbman Bros., Inc., Philadelphia, Penn.
- Henry Furnace Co., Medina, Ohio.
- Inland Steel Products Co., Milwaukee.
  Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles.
  Truscon Steel Company, Youngstown, Ohio.

Warm Air Pipe

- Acme Manufacturing Co., Philadelphia, Penn.
- Adams Co., Dubuque, Iowa.
  Berger Furnace Mfg. Co., Pittsburgh.
  Corbman Bros., Inc., Philadelphia, Penn.
  Excelsior Steel Furnace Co., Chicago, Ill.
- Hart & Cooley Mfg. Co., Holland, Mich.
- Inland Steel Products Co., Milwaukee.
  Lennox Furnace Co., Marshalltown, Ia.
  Marshall Furnace Co., Marshall, Mich.
- May-Fiebeger Co., Newark, Ohio.
- Peerless Foundry Co., Indianapolis, Ind.
  Sheet Metal Mfg. Co., Inc., Brooklyn.
- Thor Metal Products Co., Inc., Syracuse, N. Y.
- United States Register Co., Battle Creek, Mich.
  Wheeling Corrugating Company, Wheeling, W. Va.
- Williamson Heater Co., Cincinnati, Ohio.
  Young Regulator Company, Cleveland.

DEHUMIDIFIERS, ABSORPTION AND ADSORPTION

Air and Refrigeration Corp., New York City.
Bryant Heater Div., Cleveland, Ohio.
Carbide and Carbon Chemicals Corp., New York City (Triethylene glycol).
Cargocaire Engineering Corp., New York City (For ships).
Carrier Corp., Syracuse, N. Y.
Davison Chemical Corp., Baltimore, Md.
Floridin Co., Warren, Pa.
Kaufman Co., H. J., Detroit, Mich. (Absorption).
Morf Industries, Inc., Staten Island, N. Y. (Absorption).

- Advertisement in this issue. See Index to Advertisers, page 98-D.

Pittsburgh Lectrodryer Corp., Pittsburgh, Penn.
Rogers Diesel & Air Craft Corp., New York.
Socony-Vacuum Oil Co., New York City.
Solvay Sales Div., Allied Chemical & Dye Corporation, New York City.
• Surface Combustion Corp., Toledo, Ohio.
Tamms Industries Inc., Chicago, Ill.
York Corporation, York, Pa.

DIES

See Presses and Dies

DIFFUSERS, AIR, HIGH VELOCITY

• A-J Manufacturing Co., Kansas City, Mo.
Air Devices, Inc., New York City.
Aladdin Heating Corp., Oakland, Calif.
American Metal Products Co., Fort Worth, Texas (Louver).
• Anemostat Corporation of America, New York City.
• Barber-Colman Co., Rockford, Ill.
• Connor Eng. Corp., W. B., New York, N. Y.
Demuth & Sons, Charles, Mineola, L. I., N. Y.
• Hart & Cooley Mfg. Co., Holland, Mich.
Pyle-National Company, Chicago, Ill. (Low velocity discharge)
Register & Grille Manufacturing Company, Inc., Brooklyn.
• Tuttle & Bailey, Inc., New Britain, Conn.
Wilster, Inc., Cleveland.

DOWNSPOUTING AND FITTINGS

See Pipe, Conductor; Fittings and Accessories, Conductor

DRAFT DIVERTERS, GAS HEATER

• Acme Manufacturing Co., Philadelphia, Penn.
Adelta Mfg. Co., Philadelphia, Penn.
Ballonoff Metal Products Company, Cleveland (Vertical).
Bastian-Morley Co., Inc., LaPorte, Ind.
Berger Furnace Mfg. Co., Pittsburgh (Hoods).
Cleveland Heater Co., Cleveland.
Cramer Manufacturing Co., Canton, Ohio (Horizontal).
• Famous Furnace Co., Cleveland, Ohio (Hoods).
Finger, Jos. Cleveland (Hoods).
Hotstream Heater Co., Cleveland.
• Inland Steel Products Co., Milwaukee.
Los Angeles Sheet Metal Manufacturing Co., Inc., Los Angeles.
Maysteel Products, Inc., Milwaukee.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Sure Comfort Furnace Co., Forest Park, Ill.
Wilder Mfg. Co., Niles, Ohio. (Hoods)

DRAFT GAUGES

See Gauges, Draft

DRAFT REGULATORS

See Regulators, Furnace Draft, Mechanical; Dampers, Draft, Barometric; Controls

DRILLS, ELECTRIC AND PNEUMATIC, PORTABLE

Air-Speed Tool Company, Los Angeles (Pneumatic).
Albertson & Co., Inc., Sioux City, Iowa.
Black & Decker Mfg. Co., Towson, Md.
Buckeye Tools Corporation, Dayton, Ohio. (Pneumatic)
Chicago Pneumatic Tool Co., New York City.
Chicago Precision Machine Company, Chicago.
Clark, Jr., Electric Co., Jas., Louisville, Ky.
DeSoto Oil Burner Co., York, Penn. (Electric)
Independent Pneumatic Tool Co., Aurora, Ill.
Ingersoll-Rand Co., New York City.
Keller Tool Company, Grand Haven, Mich. (Pneumatic)
Mall Tool Co., Chicago, Ill. (Electric)
Millers Falls Co., Greenfield, Mass.
Mischer Mfg. Co., Inc., Syracuse, N. Y.
Portable Electric Tools, Inc., Chicago, Ill.
Rotor Tool Company, Cleveland (Pneumatic).
Signal Electric Mfg. Co., Menominee, Mich. (Electric)
• Skilsaw, Inc., Chicago.
Small Motors, Inc., Chicago, Ill. (Electric)
Snap-on Tools Corp., Kenosha, Wis.
Speedway Mfg. Co., Cicero, Ill.
Stanley Electric Tool Div., The Stanley Works, New Britain, Conn. (Electric)
Stow Mfg. Co., Binghamton, N. Y. (Flexible shaft)
Syntron Co., Homer City, Penn. (Electric).
Tempo Products Company, Cleveland. (Powder operated)
United States Electrical Tool Co., Cincinnati.
Van Dorn Electric Tool Co., Towson, Md.
• Wodack Electric Tool Corp., Chicago. (Combination Hammer and Drill).
York Electric and Machine Company, York, Penn. (Electric)

DRIVE CLEATS

See Connectors, Metal, for Metal Ducts

DRYERS, CORN, FURNACE TYPE

Campbell Heating Co., Des Moines, Iowa.
• Jackson & Church Company, Saginaw, Mich.
Link-Belt Co., Chicago.

DUCT CONNECTIONS

See Connection, Duct, Flexible

DUCT INSULATION

See Insulation, Duct

DUCT TURNING VANES

See Vanes, Duct Turning

DUCTS AND DUCT FITTINGS, PREFABRICATED

Metal

Acer & Whedon, Inc., Medina, N. Y.
• Acme Manufacturing Company, Philadelphia.
Adelta Mfg. Co., Philadelphia, Penn.
• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Berger Furnace Mfg. Co., Pittsburgh.
Champion Furnace Pipe Co., Peoria, Ill.
Chandler Co., Cedar Rapids, Ia.
• Char-Gale Mfg. Co., Minneapolis.
Chicago Furnace Supply Co., Chicago.
• Clayton & Lambert Mfg. Co., Louisville, Ky.
Corbman Bros., Inc., Philadelphia.
Detroit Safety Furnace Pipe Co., Detroit, Mich.
• Enderle, Inc., Ltd., Frank X., Los Angeles.
Excelsior Steel Furnace Co., Chicago.
Excelsior Stove & Mfg. Co., Quincy, Ill.
General Corporation, Minneapolis.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Gray Metal Products, Inc., Rochester, N. Y.
• Henry Furnace Co., Medina, O.
Herdall, A. M., Morris, Ill.
Howes-Woods Co., Cambridge, Mass.
• Inland Steel Products Co., Milwaukee.
International Heater Co., Utica, N. Y.
Keasby Co., Robert A., New York, N. Y.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
• Made-Rite Co., Inc., Newport, Ky.
Marshall Furnace Co., Marshall, Mich.
• Meyer & Bro. Co., F., Peoria, Ill.
Moncrief Furnace Co., Atlanta, Ga.
• Mueller Furnace Co., L. J., Milwaukee.
Northwest Metal Products, Inc., Seattle, Wash.
• Norwalk Air Conditioning Corp., South Norwalk, Conn.
Schecter Brothers Co., Philadelphia.
Sioux Steel Co., Sioux Falls, S. D.
Standard Furnace & Supply Co., Omaha, Nebr.
Superior Safety Furnace Pipe Co., Detroit.
• Thor Metal Products Co., Inc., Syracuse, N. Y.
Tri-State Heating Supply Inc., Fort Wayne, Ind.
• United States Register Co., Battle Creek, Mich.
• Viking Manufacturing Corp., Cleveland (Aluminum)
• Waterman-Waterbury Co., Minneapolis.
• Williamson Heater Co., Cincinnati.
• Youngstown Furnace Co., Youngstown, Ohio.

Non-Metallic

Cannelton Sewer Pipe Co., RadianTile Div., Cannelton, Ind. (Floor tile)
Carey Mfg. Co., Philip, Cincinnati, Ohio.
duPont de Nemours & Co., Inc., E. I., Wilmington, Del. (Rubberized tubing).
Flexible Tubing Corp., Branford, Conn.
Harvey-Whipple, Inc., Springfield, Mass.
Johns-Manville, New York City.
• Sail-Mountain Co., Chicago.
United States Rubber Co., New York City.

DUST COLLECTORS

See Collectors, Blow Pipe

EAVES TROUGH AND FITTINGS

See Gutters; Fittings and Accessories, Gutter

ELBOW MACHINES

See Machines, Elbow

ELECTRIC WELDERS

See Welders

• Advertisement in this issue. See Index to Advertisers, page 98-D.

ELECTRODES, WELDING

- Acme Electric Welder Co., Los Angeles. (Spot)
- Air Reduction Sales Co., New York City.
- Allegheny Ludlum Steel Corporation, Pittsburgh (Stainless).
- Aluminum Co. of America, Pittsburgh.
- American Agile Corporation, Cleveland.
- American Brass Co., Waterbury, Conn.
- American Steel & Wire Co., Cleveland.
- Arcos Corporation, Philadelphia (also holders).
- Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
- Electric Arc, Inc., Newark, N. J.
- Electroloy Company, Inc., Chicago.
- Eutectic Welding Alloys Corp., New York, N. Y.
- ● General Electric Co., Schenectady, N. Y.
- Harnischfeger Corp., Milwaukee.
- Hobart Brothers Co., Troy, O.
- Hollup Corp., Div., National Cylinder Gas Co., Chicago.
- International Nickel Co., Inc., New York, N. Y.
- Lincoln Electric Co., Cleveland.
- McKay Co., Pittsburgh.
- Marquette Mfg. Co., Inc., Minneapolis.
- Metal & Thermit Corp., New York City.
- National Carbon Company, Inc., New York City.
- National Cylinder Gas Co., Chicago.
- Page Steel & Wire Div. of American Chain & Cable Co., Inc., Monessen, Pa.
- Sight Feed Generator Co., West Alexandria, Ohio.
- Smith Corporation, A. O., Milwaukee.
- Taylor-Winfield Corp., Warren, Ohio.
- Trindl Products, Ltd., Chicago.
- Tweco Products Company, Wichita, Kansas. (Holders)
- Universal Welder Corporation, Cleveland.
- Welding Sales & Engineering Co., Detroit.
- Westinghouse Electric Corporation, Pittsburgh, Pa.

EXHAUSTERS, WELDING FUME

- ● American Machine Products Co., Marshalltown, Ia.
- Ammerman Co., C. L., Minneapolis, Minn.
- Babbis, Inc., New York, N. Y. (Mill)
- Belanger Fan & Blower Co., Detroit.
- Champion Blower & Forge Co., Lancaster, Pa.
- Chelsea Fan & Blower Co., Irvington, N. J.
- Chicago Blower Corporation, Chicago.
- Coppus Engineering Corp., Worcester, Mass.
- ● Dana Fan & Blower Corporation, Cincinnati.
- Day Co., Minneapolis.
- Despatch Oven Co., Minneapolis.
- General Blower Co., Morton Grove, Ill.
- Jenn Air Products Co., Indianapolis, Ind.
- ● Kirk & Blum Mfg. Co., Cincinnati, O.
- Kloppenborg Aluminum Foundry, Davenport, Iowa.
- Martin Fan & Blower Co., Chicago.
- Ruemelin Mfg. Co., Milwaukee.
- Torit Manufacturing Co., St. Paul, Minn.
- ● Trade-Wind Motorfans, Inc., Los Angeles.
- ● Utility Appliance Corporation, Los Angeles.
- Wind-Way Fan & Ventilator Co., New Orleans, La.

EXPANSION BOLTS

See Bolts, Expansion

FACES, COLD AIR

Metal

- ● Acme Manufacturing Co., Philadelphia, Penn.
- ● A-J Manufacturing Co., Kansas City, Mo.
- ● Air Control Products, Inc., Coopersville, Mich.
- American Foundry & Furnace Co., Bloomington, Ill.
- ● Auer Register Co., Cleveland.
- ● Barber-Colman Co., Rockford, Ill.
- Berger Furnace Mfg. Co., Pittsburgh, Penn.
- Best Register Co., Milwaukee, Wis.
- Controlair Manufacturing Co., Los Angeles.
- Diamond Manufacturing Co., Wyoming, Pa.
- Greenberg's Sons, M., San Francisco.
- ● Hart & Cooley Manufacturing Co., Holland, Mich.
- Hendrick Manufacturing Co., Carbondale, Pa.
- ● Independant Register Co., Cleveland, O.
- ● Lima Register Co., Lima, Ohio.
- Midco Register Corporation, St. Paul, Minn.
- Mundt & Sons, Charles, Jersey City, N. J.
- Register & Grille Manufacturing Company, Inc., Brooklyn.
- ● Rock Island Register Co., Rock Island, Ill.
- Stewart Manufacturing Co., Bloomfield, N. J.
- ● Thor Metal Products Co., Inc., Syracuse, N. Y.
- ● Tuttle & Bailey, Inc., New Britain, Conn.
- ● United States Register Co., Battle Creek, Mich.

Wood

- Marsh Lumber Co., Inc., Dover, O.
- ● United States Register Co., Battle Creek, Mich.

FAN CONTROLS

See Controls

FAN-FILTER UNITS, PROPELLER TYPE, WARM AIR FURNACE

- ● Air Controls, Inc., Cleveland.
- Mellish & Murray Co., Chicago.
- Peerless Electric Co., Warren, Ohio.
- ● Utility Appliance Corporation, Los Angeles.

FAN HOUSINGS

See Housings, Blower and Fan

FANS, PROPELLER TYPE

Axial Flow

- Aerovent Fan Co., Piqua, Ohio.
- American Blower Corp., Detroit, Mich.
- ● Buffalo Forge Co., Buffalo, N. Y.
- Chicago Blower Corp., Chicago, Ill.
- De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
- Hartzell Propeller Fan Co., Piqua, Ohio.
- Ilg Electric Ventilating Co., Chicago, Ill.
- International Engineering, Inc., Dayton, O.
- Joy Manufacturing Co., Pittsburgh, Penn.
- Moore Co., Marceline, Mo.
- Robbins & Myers, Inc., Springfield, Ohio.
- South Bend Air Products Corp., South Bend, Ind.
- Thermo-Aire Division, Evans Products Company, Plymouth, Mich.
- Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
- Wing Mfg. Co., L. J., New York City.

Booster, Cold Air Return

- Advance Aluminum Castings Corp., Chicago.
- Bern's Mfg. Co., Chicago.
- Brumme Mfg. Co., Bloomington, Ill.
- Calimode, Incorporated, Atlanta, Ga.
- Cary Mfg. Co., Waupaca, Wis.
- General Blower Co., Inc., Philadelphia.
- International Engineering, Inc., Dayton, O.
- Joy Manufacturing Co., Pittsburgh, Penn.
- Martin Fan & Blower Co., Chicago.
- Mauer Engineering, Evanston, Ill.
- Peerless Electric Co., Warren, Ohio.
- Robbins & Myers, Inc., Springfield, Ohio.
- ● Utility Appliance Corporation, Los Angeles.
- ● Western Engineering & Manufacturing Co., Los Angeles, Calif.

Booster, One-Pipe Warm Air

- Advance Aluminum Castings Corp., Chicago.
- Brumme Mfg. Co., Bloomington, Ill.
- Champion Blower & Forge Co., Lancaster, Pa.
- Dual-Air Fan Corporation, South Elgin, Ill.
- Heat Hustler, Bloomington, Ill.
- ● McLarty Systems, Battle Creek, Mich.
- Martin Fan & Blower Co., Chicago, Ill.
- Mauer Engineering, Evanston, Ill.
- Rayfield Co., C. L., Chicago, Ill.
- Robbins & Myers, Inc., Springfield, Ohio.
- Standard Electric Mfg. Co., Inc., West Berlin, N. J.
- Victor Electric Products, Inc., Cincinnati.
- ● Western Engineering & Manufacturing Co., Los Angeles.

Furnace, Propeller Type

- ● Air Controls, Inc., Cleveland.
- Belanger Fan & Blower Co., Detroit.
- Brumme Mfg. Co., Bloomington, Ill.
- Century Fan & Ventilator Co., Stamford, Conn.
- ● Corlett-Turner Co., Chicago, Ill.
- Dual-Air Fan Corporation, South Elgin, Ill.
- Ilg Electric Ventilating Co., Chicago, Ill.
- Joy Manufacturing Co., Pittsburgh, Penn.
- Martin Fan & Blower Co., Chicago.
- Meier Electric & Machine Co., Indianapolis.
- Peerless Electric Co., Warren, Ohio.
- Robbins & Meyers, Inc., Springfield, Ohio.
- ● Utility Appliance Corporation, Los Angeles.

Kitchen Exhaust

- Air Equipment Co., Inc., Chicago.
- Airecon Industries, Detroit, Mich.
- Airmaster Corp., Chicago.
- American Blower Corp., Detroit.
- Arex Co., Chicago.
- Bar-Brook Mfg. Co., Inc., Shreveport, La.

● Advertisement in this issue. See Index to Advertisers, page 95-D.

FANS, PROPELLER TYPE—(Cont'd)

Belanger Fan & Blower Co., Detroit.
Bern's Mfg. Co., Chicago.
• Bishop & Babcock Mfg. Co., Cleveland.
Broan Mfg. Co., Inc., Milwaukee, Wis.
• Buffalo Forge Co., Buffalo.
C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
Central States Mfg. Co., Inc., Arkansas City, Kans.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
• Clarage Fan Co., Kalamazoo, Mich.
Commercialaire, Inc., Brooklyn.
Crane Co., Chicago, Ill.
Dana Fan & Blower Corporation, Cincinnati.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corp., South Elgin, Ill.
Electrovent Corp., Detroit.
Electrovent Fan & Mfg. Co., Chicago.
• Emerson Electric Mfg. Co., St. Louis.
Fasco Industries, Inc., Rochester, N. Y.
Filkins, Inc., Edward, Chicago, Ill.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Ilg Electric Ventilating Co., Chicago, Ill.
Jenn Air Products Co., Indianapolis, Ind.
Johnson Fan & Blower Corp., Chicago, Ill.
King Co., Owantonna, Minn.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
• Lau Blower Co., Dayton, Ohio.
Mahl Mfg. Co., Huntington Park, Calif.
Martin Fan & Blower Co., Chicago.
Meyer Manufacturing Co., Detroit.
Myers Electric Co., Inc., Pittsburgh, Penn.
National Appliance Company, Detroit.
National Gas Equipment Co., Inc., Terrell, Texas.
New York Blower Co., Chicago.
Peerless Electric Co., Warren, Ohio.
• Pryne & Co., Inc., Pomona, Calif.
Roto-Beam Div., Peerless of America, Inc., Chicago.
Schwitzer-Cummins Company, Indianapolis Ind.
Signal Electric Mfg. Co., Menominee, Mich.
Simpson Screen Co., Oakland, Calif.
Skinner Heating & Ventilating Co., Inc., St. Louis.
Sprouse Company, Inc., V. E., Columbus, Indiana.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Stewart Manufacturing Co., Indianapolis, Ind.
• Trade-Wind Motorfans, Inc., Los Angeles, Calif.
United States Radiator Corp., Detroit, Mich.
Universal Blower Co., Birmingham, Mich.
Victor Electric Products, Inc., Cincinnati.
Ward Industries, Inc., Edgar T., Chicago, Ill.
West Wind Corporation, Seattle.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corporation, Pittsburgh, Pa.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.

Night Air Cooling

Acme Equipment Co., Muskogee, Okla.
• Air Controls, Inc., Cleveland.
Air Equipment Co., Inc., Chicago.
Airecon Industries, Detroit, Mich.
Airmaster Corp., Chicago.
Allen Ventilator Div., Rochester, Mich.
• Alton Manufacturing Co., Dallas, Tex.
American Blower Corp., Detroit.
American Coolair Corp., Jacksonville, Fla.
American Metal Products Co., Fort Worth, Tex.
Arlington Electric Co., St. Louis, Mo.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Belanger Fan & Blower Co., Detroit.
Belter Electric Mfg. Co., G. J., St. Louis.
Bern's Mfg. Co., Chicago.
• Buffalo Forge Co., Buffalo.
C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Chicago Blower Corp., Chicago, Ill.
Circulators & Devices Mfg. Corp., New York City.
Climax Machinery Company, Indianapolis, Ind.
Dana Fan & Blower Corporation, Cincinnati.
De Bothezat Fans Div. American Machine & Metals, Inc., East Moline, Ill.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corporation, South Elgin, Ill.
Eagle-Picher Company, Cincinnati, Ohio.
Earl Company, Warren, Houston, Tex.
Electrovent Fan & Mfg. Co., Chicago.
• Emerson Electric Mfg. Co., St. Louis.
Folsom Company, Inc., Dallas, Tex.
Fresh Air Circulator Co., Houston, Tex.
Fresh'nd-Aire Co., Chicago.
General Blower Co., Inc., Philadelphia.
Great National Air Conditioning Corp., Oklahoma City, Okla.
Hartzell Propeller Fan Co., Piqua, O.
• Holcomb & Hoke Mfg. Co., Inc., Indianapolis.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, O.
International Oil Burner Co., St. Louis, Mo.
Johnson Fan & Blower Corp., Chicago.
Jordan & Co., Inc., Paul R. Indianapolis, Ind.
King Co., Owatonna, Minn.
Lakewood Engineering & Mfg. Co., Chicago.
• Lau Blower Co., Dayton, O.
Martin Fan & Blower Co., Chicago.
Meier Electric & Machine Co., Indianapolis.
National Gas Equipment Co., Inc., Terrell, Texas.
New York Blower Co., Chicago.
• Palmer Manufacturing Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Reed Unit-Fans, Inc., New Orleans, La.
Robbins & Meyers, Inc., Springfield, Ohio.
Roto-Beam Div., Peerless of America, Chicago.
Schwitzer-Cummins Co., Indianapolis.
Seco-Lite Manufacturing Co., St. Louis.
South Bend Air Products, Inc., South Bend, Ind.
Sprouse Co., Inc., V. E., Columbus, Ind.
Standard Electric Mfg. Co. Inc., West Berlin, N. J.
Stonewall Company, Chicago.
• U. S. Air Conditioning Corp., Minneapolis.
United States Radiator Corp., Detroit, Mich.
• Utility Appliance Corporation, Los Angeles.
Victor Electric Products, Inc., Cincinnati.
• Viking Air Conditioning Corp., Cleveland.
Ward Industries, Inc., Edgar T. Chicago, Ill.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Wind-Way Fan & Ventilating Co., New Orleans.

Ventilating System (Capacity 4,000 cfm up)

Acme Equipment Co., Muskogee, Okla.
Aerovent Fan Co., Inc., Piqua, Ohio.
• Air Controls, Inc., Cleveland.
Air Equipment Co., Inc., Chicago.
Airmaster Corp., Chicago.
Allen Ventilator Div., Rochester, Mich.
American Blower Corp., Detroit.
American Coolair Corp., Jacksonville, Fla.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago.
Arlington Electric Co., St. Louis.
Babbin, Inc., New York City.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Belanger Fan & Blower Co., Detroit.
Belter Electric Mfg. Co., G. J., St. Louis.
Bern's Mfg. Co., Chicago.
• Bishop & Babcock Mfg. Co., Cleveland.
Bishop Co., R. H., Champaign, Ill.
• Buffalo Forge Co., Buffalo.
C. & H. Air Conditioning Fan Co., Inc., Atlanta, Ga.
Campbell Heating Company, E. K., Kansas City, Mo.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Chicago Blower Corp., Chicago, Ill.
Chicago Fan & Fin Coil Co., Chicago.
Circulators & Devices Mfg. Corp., New York City.
• Clarage Fan Co., Kalamazoo, Mich.
Climax Machinery Company, Indianapolis, Ind.
Commercialaire, Inc., Brooklyn.
Coppus Engineering Corporation, Worcester, Mass.
Dana Fan & Blower Corporation, Cincinnati.
De Bothezat Fans Division, American Machine & Metals, Inc., East Moline, Ill.
De Vilbiss Company, Toledo.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corporation, South Elgin, Ill.
Duriron Co., Inc., Dayton, O. (Acid Resisting).
Earl Company, Warren, Houston, Tex.
Electrovent Fan & Mfg. Co., Chicago.
• Emerson Electric Mfg. Co., St. Louis.
Folsom Company, Inc., Dallas, Tex.
Ford Blow Pipe & Manufacturing Co., Memphis, Tenn.
Fresh'nd-Aire Co., Chicago.
Garden City Fan Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
Goetti Bros. Phoenix, Ariz.
Hartzell Propeller Fan Co., Piqua, O.
• Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Ind.
Holden Fan Co., Detroit.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, O.
International Oil Burner Co., St. Louis, Mo.
Johnson Fan & Blower Corp., Chicago.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Joy Manufacturing Co., Pittsburgh, Penn.
King Co., Owatonna, Minn.
Kisco Company, Inc., St. Louis.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Lakewood Engineering & Mfg. Co., Chicago.
• Lau Blower Co., Dayton, O.
Marathon Electric Mfg. Corp., Wausau, Wis.
Martin Fan & Blower Co., Chicago.
Meier Electric & Machine Co., Indianapolis.
Moore Co., Marceline, Mo.
Mountain States Equipment Co., Denver, Colo.

• Advertisement in this issue. See Index to Advertisers, page 91-D.

FANS, PROPELLER TYPE—(Cont'd)

Murray Co. of Texas, Inc., Dallas, Texas.
Myers Electric Co., Inc., Pittsburgh, Penn.
National Gas Equipment Co., Inc., Terrell, Texas.
Nelson Corporation, Herman, Moline, Ill.
New York Blower Co., Chicago.
• Palmer Manufacturing Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Phelps Mfg. Co., Little Rock, Ark.
Reed Unit-Fans, Inc., New Orleans, La.
Reynolds Electric Company, River Grove, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Roto-Beam Div., Peerless of America, Inc., Chicago.
Schwitzer-Cummins Co., Indianapolis.
Seco-Lite Manufacturing Co., St. Louis.
Signal Electric Mfg. Co., Menominee, Mich.
Skinner Heating & Ventilating Co., Inc., St. Louis.
South Bend Air Products, Inc., South Bend, Ind.
Sprouse Co., Inc., V. E., Columbus, Ind.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
• Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Trane Co., LaCrosse, Wis.
Trufio Fan Co., Harmony, Pa.
• U. S. Air Conditioning Corp., Minneapolis.
• Utility Appliance Corporation, Los Angeles.
• Viking Air Conditioning Corp., Cleveland.
Ward Industries Inc., Edgar T., Chicago, Ill.
Western Blower Co., Seattle, Wash.
• Western Engineering & Mfg. Co., Los Angeles.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
White Co., Kelvin & Wilfrid O., Boston, Mass.
Wind-Way Fan & Ventilating Co., New Orleans.
Wing Mfg. Co., L. J., New York City.

FASTENINGS, SHEET METAL

Any Wall Anchor Co., 1606 Locust St., St. Louis 3, Mo.
Camloc Fastener Corporation, New York City.
Cuyahoga Spring Company, Cleveland.
Devices, Inc., New York, N. Y. (Surface anchors)
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Friedley-Voshardt Co., Chicago.
Shakeproof, Inc., Chicago.
South Chester Corp., Philadelphia, Penn.
Star Expansion Bolt Co., New York City.
Stic-Klip Manufacturing Company, Cambridge, Mass.
Tinnerman Products, Inc., Cleveland.
United-Carr Fastener Corporation, Cambridge, Mass. (Studs, receptacles, clips, special nuts, etc.).

FELT, ROOFING

Barber Co., Inc., Philadelphia.
Barrett Division, Allied Chemical & Dye Corporation, New York City.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Certain-teed Products Corp., Ardmore, Pa.
Detroit Steel Products Co., Detroit.
Flintkote Co., New York City.
Ford Roofing Products Co., Chicago.
Globe Roofing Products Co., Inc., Whiting, Ind.
Johns-Manville, New York City.
Koppers Co., Inc., Pittsburgh, Penn. (Tarred)
Lehon Company, Chicago.
Lexington Supply Co., Cleveland, Ohio.
National Mfg. Corp., Tonawanda, N. Y.
Ohio Paper Co., Miamisburg, Ohio.
• Owens-Corning Fiberglas Corporation, Toledo, O.
Proie & Coogan Heating Co., Pittsburgh.
Reilly Tar & Chemical Corp., Indianapolis.
Ruberoid Co., New York City.

FILTERS, AIR

Automatic

Air & Refrigeration Corp., New York City.
Air Stream Filter Corp., St. Louis.
American Air Filter Co., Inc., Louisville, Ky.
Continental Air Filters, Inc., Louisville, Ky.
Day Co., Minneapolis, Minn.
Dollinger Corporation, Rochester, N. Y.
Farr Co., Los Angeles, Calif.

Cleanable

Air Devices, Inc., New York City. (Steel wire mesh).
Air & Refrigeration Corp., New York, N. Y.
Air Filter Corporation, Milwaukee.
Air Maze Corp., Cleveland (Metal-Wire Baffles).
Air Stream Filter Corp., St. Louis.
American Air Filter Co., Inc., Louisville, Ky. (Steel wool).
Chicago Filter Co., Joliet, Ill.
Continental Air Filters, Inc., Louisville, Ky.
Coppus Engineering Corp., Worcester, Mass. (Felt).
Dollinger Corporation, Rochester, N. Y. (Feltex, Glastex, heat resistant cotton).
Drico Industrial Corporation, New York City (Felt).
Farr Company, Los Angeles, Calif. (Metal)
Kauffman Air Conditioning Corp., St. Louis, Mo. (Aluminum)
• Research Products Corporation, Madison, Wis. (Metal).
Somers, Inc., H. J., Detroit (Hair, Glass).
Universal Air Filter Corp., Duluth, Minn. (Cellulose).

Electrostatic

American Air Filter Co., Inc., Louisville, Ky.
Raytheon Mfg. Co., Waltham, Mass.
Trion, Inc., McKees Rocks, Penn.
Westinghouse Electric Corp., Pittsburgh, Penn.

Throwaway

American Air Filter Co., Inc., Louisville, Ky.
Chicago Filter Co., Joliet, Ill.
• Detroit Air Filter Co., Woodstock, Ill. (Fibreboard).
Drico Industrial Corporation, New York City (Glass)
• Master Products Co., Inc., Chicago, Ill.
• Owens-Corning Fiberglas Corp., Toledo, O. (Fiberglas).
• Research Products Corp., Madison, Wis.
Sanit-Air Products Co., South Bend, Ind. (Register-steel wool).
Universal Air Filter Corp., Duluth, Minn. (Cellulose).
• Wilson & Co., Inc., Chicago (Animal Hair).

FILTERS, FUEL OIL

• Automatic Products Co., Milwaukee, Wis.
Commercial Filters Corp., Boston, Mass.
Cos-Nef Corp., St. Johnsbury, Vt.
Cuno Engineering Corp., Meriden, Conn.
Framm Corp., Providence, R. I.
• General Filters, Inc., Detroit, Mich.
Klemm Automotive Products Co., Chicago, Ill.
Kraissl Co., Inc., Hackensack, N. J.
Morse-Smith-Morse, Inc., Watertown, Mass.
Rega Mfg. Co., Rochester, N. Y.
Sparkler Mfg. Co., Mundelein, Ill.
W.G.B. Oil Clarifier, Inc., Kingston, N. Y.

FILTERS, GREASE

Air Filter Corp., Milwaukee, Wis.
American Air Filter Co., Inc., Louisville, Ky.
Farr Co., Los Angeles, Calif.
• Research Products Corp., Madison, Wis.

FIRE BRICK

See Refractories

FIREPOTS

See Repairs, Stove and Furnace

FITTINGS AND ACCESSORIES

Blow Pipe

(Elbows, Flanges, Hangers, Hoods and Scoops, Joints, Rings, Tubing)

• Ajax Furnace Fitting Co., Div. Sheet Metal & Roofing Co., Cincinnati.
Barcafer Mfg. Co., Salina, Kansas.
• Chicago Metal Mfg. Co., Chicago.
Day Co., Minneapolis.
Falstrom Co., Passaic, N. J.
Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
• Kirk & Blum Mfg. Co., Cincinnati (Adjustable Buffing Hoods).
Lyman Co., H. B., Southampton, Mass.
• National Metal Fabricators, Chicago.
Newcomb-Detroit Co., Detroit, Mich.
Northern Blower Co., Cleveland.
Puhl & Hepper Mfg. Co., Inc., St. Louis.
Schmieg Industries, Detroit.
Skinner Heating & Vent Co., Heater Div. of St. Louis Blow Pipe & Heater Co., Inc., St. Louis.
Sleeth & Son, J. E., Spokane, Wash.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Winkler & Sons, Inc., A. E., Milwaukee.
Young & Bertke Co., Cincinnati.

Conductor

(Elbows, Heads, Hooks, Shoes, Straps, Drains, Scuppers, etc.)

• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Atchison Specialty Mfg. Co., Atchison, Kan. (Scuppers, drains).
Barnes Metal Products Co., Chicago.
• Berger Bros. Co., Philadelphia.
• Berger Mfg. Div. of Republic Steel Corp., Canton, O.
Braden Mfg. Co., Terre Haute, Ind.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

FITTINGS & ACCESSORIES—(Cont'd)

Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
• Cincinnati Elbow Co., Cincinnati (Elbows)
Crary Mfg. Co., Middleport, O. (Cut-off).
Dieckmann Co., Ferdinand, Cincinnati.
Downs-Smith Brass & Copper Co., New York City.
Edwards Mfg. Co., Inc., Cincinnati.
• Franck & Fric, Cleveland, Ohio.
• Galvan Manufacturing Co., New Albany, Ind. (Cut-offs).
Gerhardt Co., Inc., Geo. T., San Francisco, Calif.
Globe Iron Roofing & Corrugating Co., Newport, Ky.
Gray Metal Products, Inc., Rochester, N. Y.
• Hussey & Co., C. G., Pittsburgh, Penn. (Copper)
• Inland Steel Products Co., Milwaukee.
Iwan Bros. South Bend, Ind.
Josam Manufacturing Co., Cleveland (Drains and scuppers).
Klauer Mfg. Co., Dubuque, Ia.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lamb & Ritchie Co., Cambridge, Mass.
• Levow, David, New York City.
Lyon, Conklin & Co., Inc., Baltimore.
Maysteel Products, Inc., Milwaukee.
• Miller & Doing, Brooklyn.
New Delphos Manufacturing Co., Delphos, Ohio.
Northwest Metal Products, Inc., Seattle, Wash.
• Obdyke, Inc., B. P., Philadelphia, Penn.
Ohio Wire Products Co., Dover, Ohio.
Penn Supply & Metal Corp., Philadelphia, Penn.
Rattan Mfg. Co., New Haven, Conn.
Reeves Steel & Mfg. Co., Dover, Ohio.
Reynolds Metals Co., Louisville, Ky.
Rival Strap Corp., New York City (Ornamental Conductor Straps).
Royal-Apex Mfg. Corp., Brooklyn.
St. Paul Corrugating Co., St. Paul, Minn.
Schoedinger, F. O., Columbus, O.
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sheet Metal Products Co., Peoria, Ill.
Sioux Steel Co., Sioux Falls, S. D.
• Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio. (Heads)
Wheeling Corrugating Company, Wheeling, W. Va.
• Williams-Wallace Co., San Francisco, Calif.

Furnace Pipe

(Angles, Boots, Elbows, Heads, Joints, Offsets, Tees, etc.)

Acer & Whedon, Inc., Medina, N. Y.
Acme Furnace Fittings Co., Chicago.
• Acme Manufacturing Company, Philadelphia.
Adelta Mfg. Co., Philadelphia, Penn.
• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
• Armstrong Furnace Company, Columbus, Ohio.
Berger Furnace Mfg. Co., Pittsburgh.
Bergstrom Mfg. Corp., Neenah, Wis.
Bieber & Son, Long Island City. (Adjustable elbows).
Braden Mfg. Co., Terre Haute, Ind.
Champion Furnace Pipe Co., Peoria, Ill.
• Char-Gale Mfg. Co., Minneapolis.
Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Cincinnati Stamping & Furnace Co., Cincinnati.
• Clayton & Lambert Mfg. Co., Louisville, Ky.
Corbman Bros., Inc., Philadelphia.
Detroit Safety Furnace Pipe Co., Detroit.
• Eisbach, Albert N., Dubuque, Iowa. (Elbows)
• Enderle, Inc., Ltd., Frank X., Los Angeles.
Excelsior Steel Furnace Co., Chicago.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Gray Metal Products, Inc., Rochester, N. Y.
Green Colonial Furnace Co., Des Moines, Ia.
• Henry Furnace Company, Medina, Ohio.
Herbert & Sons, R. D., Nashville, Tenn.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Howes-Woods Company, Cambridge, Mass.
• Inland Steel Products Co., Milwaukee.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
Keith Furnace Company, Des Moines, Iowa.
• Krauser-Boyd, Inc., North Tonawanda, N. Y. (Angles, elbows, boots, heads, etc.)
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis. (Elbows)
Lennox Furnace Co., Marshalltown, Ia.
Los Angeles Sheet Metal Manufacturing Co., Inc., Los Angeles
Lyman Co., H. B., Southhampton, Mass.
Lyon, Conklin & Co., Inc., Baltimore.
• Made-Rite Co., Inc., Newport, Ky.
• Majestic Co., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
• Meyer & Bro. Co., F., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee.
Northwest Metal Products, Inc., Seattle, Wash.
• Norwalk Air Conditioning Corp., South Norwalk, Conn.
• Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
• Olsen Manufacturing Company, C. A., Elyria, Ohio.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
• Peerless Foundry Co., Indianapolis.
Portland Stove Foundry Co., Portland, Me.
• Premier Furnace Company, Dowagiac, Mich.
Reeves Steel & Mfg. Co., Dover, O.
Riggin Metal Products, Inc., Kankakee, Ill.
• Rock Island Register Co., Rock Island, Ill.
Schecter Brothers Co., Philadelphia.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Specialty Div. Follansbee Steel Corp., Pittsburgh.
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sioux Steel Co., Sioux Falls, S. D.
Souther Iron Co., E. E., St. Louis.
Standard Furnace & Supply Co., Omaha, Nebr.
Stratton & Terstegge Co., Louisville, Ky.
• Superior Products Co., Omaha, Nebr.
• Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio. (Angles, boots, heads, joints & elbows)
Tri-State Heating Supply Inc., Fort Wayne, Ind.
• United States Register Co., Battle Creek, Mich.
• Waterman-Waterbury Co., Minneapolis.
Waverly Heating Supply Co., Boston.
Wheeling Corrugating Company, Wheeling, W. Va.
• Williamson Heater Co., Cincinnati.

Gutter

(Hangers, Strainers, Miters, Ends, Thimbles, etc.)

Abbot Mfg. Co., Painesville, O. (Hangers).
• Ajax Furnace Fitting Co., Div Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Barnes Metal Products Co., Chicago.
• Berger Bros. Co., Philadelphia.
Berger Mfg. Div. of Republic Steel Corp., Canton, O.
Braden Mfg. Co., Terre Haute, Ind.
Campbell Stainless Products Co., Washington, Penn. (Stainless steel)
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Downs-Smith Brass & Copper Co., New York City.
Eav-Tex Company, Havertown, Pa. (Roof Gutter Protection).
Edwards Mfg. Co., Inc., Cincinnati.
• Enderle Inc., Ltd., Frank X., Los Angeles, Calif.
• Famous Furnace Co., Cleveland (Strap hangers, end caps).
• Galvan Manufacturing Co., New Albany, Ind. (Cut-offs, Funnels)
Globe Iron Roofing & Corrugating Co., Newport, Ky.
Grand Rapids Wire Products Co., Grand Rapids, Mich.
Gray Metal Products, Inc., Rochester, N. Y.
Herbert & Sons, R. D., Nashville, Tenn.
• Hussey & Co., C. G., Pittsburgh (Copper).
• Inland Steel Products Co., Milwaukee, Wis.
Iwan Brothers, South Bend, Ind.
J & J Sheet Metal Co., Van Dyke, Mich.
Klauer Mfg. Co., Dubuque, Ia.
• Krauser-Boyd, Inc., North Tonawanda, N. Y., (Eaves trough, hangers, miters).
LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Lamb & Ritchie Co., Cambridge, Mass.
• Levow, David, New York City.
Lyon, Conklin & Co., Inc., Baltimore.
New Delphos Manufacturing Co., Delphos, Ohio.
Northwest Metal Products, Inc., Seattle, Wash.
• Obdyke, Inc., B. P., Philadelphia, Penn.
Ohio Wire Products Co., Dover, O. (Hangers).
Penn Supply & Metal Corp., Philadelphia.
• Pioneer Tool Company, Racine, Wis. (Gutter Clamp).
Reeves Steel & Mfg. Co., Dover, O.
Reynolds Metals Company, Louisville, Ky. (Aluminum).
Riggin Metal Products, Inc., Kankakee, Ill.
Royal-Apex Mfg. Corp., Brooklyn.
Saint Paul Corrugating Co., St. Paul, Minn.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sheet Metal Products Co., Peoria, Ill.
Sioux Steel Co., Sioux Falls, S. D.
Snap-On Mfg. Co., Chicago (Hangers).
Souther Iron Co., E. E., St. Louis.
Southern States Iron Roofing Co., Savannah, Ga.
• Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio. (Hangers, miters, ends, thimbles)
Tiffin Eaves Trough Clamp Co., Tiffin, Ohio (Clamp).
Wade Manufacturing Co., Div. of Woodruff & Edwards, Inc., Elgin, Ill. (Roof Drains).
Wheeling Corrugating Company, Wheeling, W. Va.
• Williams-Wallace Co., San Francisco, Calif.

Oil Burner

Amplon Corporation, Long Island City (Oil Tank Solvent).
Bearlee Products Co., Green Bay, Wis. (Vent Caps)
Boston Machine Works Company, Lynn, Mass. (Nozzle extractor)

• Advertisement in this issue. See Index to Advertisers, page 98-D.

FITTINGS & ACCESSORIES—(Cont'd)

Calco Corporation, New York City. (Solvent)
• Dole Valve Co., Chicago, Ill. (Brass valves)
Fisher Governor Company, Marshalltown, Ia. (Liquid Level Controller).
Gas & Oil Industry Laboratories, Inc., Irvington, N. J. (Valves).
Hays Manufacturing Co., Erie, Pa. (valves & fittings)
Heetrliter Co., Newberg, Ore. (Lighter)
Imperial Brass Mfg. Co., Chicago, Ill. (Flaring, bending & cutting tools for tubing)
Modern Die & Machine Co., Boston, Mass. (Combustion head)
Morse-Smith-Morse, Inc., Watertown, Mass. (Vent caps, valves)
Mueller Co., Decatur, Ill. (Valves)
Oil Equipment Mfg. Co., New Haven, Conn. (Vent caps, fuel pump testers, flaring tools, oil storage tank fittings)
Petroleum Solvents Corporation, New York City (Oil Tank Solvent).
Radiator Specialty Co., Charlotte, N. C. (Tank solvent)
Rajah Company, Bloomfield, N. J. (Wire Crimper & terminals)
Rattan Manufacturing Co., New Haven, Conn. (Connectors)
Red Wing Oil Burner Co., Inc., Chelsea, Mass. (Tank solvent)
Richfield Mfg. Corp., Baldwin, L. I., N. Y. (Combustion head)
• Rochester Mfg. Co., Inc., Rochester, N. Y. (Test kits)
S.O.S. Products Co., Inc., Brooklyn, N. Y. (Tank solvent)
Shell Oil Co., New York City (Combustion head).
Snap-on Tools Corp., Kenosha, Wis. (Flaring tools)

Smoke Pipe

(Draw-bands, Clean-outs, Collars, Tees, etc.)

Acer & Whedon, Inc., Medina, N. Y.
• Acme Manufacturing Company, Philadelphia.
Adelta Mfg. Co., Philadelphia, Penn.
• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
• Armstrong Furnace Company, Columbus, Ohio.
Ballonoff Metal Products Company, Cleveland.
Berger Furnace Mfg. Co., Pittsburgh.
Bergstrom Mfg. Corp., Neenah, Wis.
Bieler & Son, L., Long Island City, N. Y.
Braden Mfg. Co., Terre Haute, Ind.
Cary Mfg. Co., Waupaca, Wis.
Champion Furnace Pipe Co., Peoria, Ill.
• Char-Gale Mfg. Co., Minneapolis.
Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Cincinnati Stamping & Furnace Co., Cincinnati.
• Clayton & Lambert Mfg. Co., Louisville, Ky.
• Condensation Engineering Corporation, Chicago.
Corbman Bros., Inc., Philadelphia.
Detroit Safety Furnace Pipe Co., Detroit.
• Eisbach, Albert N., Dubuque, Iowa. (Drawbands)
Excelsior Steel Furnace Co., Chicago.
Excelsior Stove & Mfg. Co., Quincy, Ill.
• Famous Furnace Co., Cleveland, Ohio.
Gray Metal Products, Inc., Rochester, N. Y.
Green Colonial Furnace Co., Des Moines, Ia.
• Henry Furnaces Company, Medina, Ohio.
Herbert & Sons, R. D., Nashville, Tenn.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Howes-Woods Company, Cambridge, Mass.
• Inland Steel Products Co., Milwaukee.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Keith Furnace Company, Des Moines, Ia.
• Kirk & Blum Mfg. Co., Cincinnati.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lennox Furnace Co., Marshalltown, Ia.
Lyman Co., H. B., Southampton, Mass.
Lyon, Conklin & Co., Inc., Baltimore.
• Made-Rite Co., Inc., Newport, Ky.
• Majestic Co., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
• May-Fiebeger Company, Newark, Ohio.
• Meyer & Bro. Co., F., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Metal Products, Inc., Seattle, Wash.
• Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
Peacard Co., M. A., Boston.
• Peerless Foundry Co., Indianapolis.
Portland Stove Foundry Co., Portland, Me.
• Premier Furnace Company, Dowagiac, Mich.
Reeves Steel & Mfg. Co., Dover, O.
Riggin Metal Products, Inc., Kankakee, Ill.
• Rock Island Register Co., Rock Island, Ill.
Schecter Brothers Co., Philadelphia.
Schoedinger, F. O., Columbus, O.
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Penn.
Sioux Steel Co., Sioux Falls, S. D.
Souther Iron Co., E. E., St. Louis.
Standard Furnace & Supply Co., Omaha, Nebr.
Stratton & Terstegge Co., Louisville, Ky.
• Superior Products Co., Omaha, Nebr.
• Thor Metal Products Co., Inc., Syracuse, N. Y.
Tierney Rotor Ventilator Co., Minneapolis.
Tiffin Art Metal Co., Tiffin, Ohio. (Draw-bands, clean-outs, collars, tees)
Tri-State Heating Supply Inc., Fort Wayne, Ind.
• United States Register Co., Battle Creek, Mich.
• Waterman-Waterbury Co., Minneapolis.
Waverly Heating Supply Co., Boston.
Wheeling Corrugating Company, Wheeling, W. Va.
Wilder Manufacturing Co., Niles, O.
• Williamson Heater Co., Cincinnati.

FITTINGS, COPPER TUBE, COMPRESSION AND FLARED

American Brass Co., Waterbury, Conn.
Barcafer Mfg. Co., Salina, Kans.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Commonwealth Brass Corp., Detroit.
Conklin Brass & Copper Co., Inc., T. E., New York City.
Crane Co., Chicago.
Downs-Smith Brass & Copper Co., Inc., New York City.
Everhot Products Co., Chicago.
Fisher Brass Foundry, Los Angeles.
Gray-Wilson Company, Detroit.
Grinnell Co., Inc., Providence, R. I.
Hays Mfg. Co., Erie, Pa.
Imperial Brass Mfg. Co., Chicago.
Kerotest Mfg. Co., Pittsburgh.
Mueller Co., Decatur, Ill.
Northern Indiana Brass Co., Elkhart, Ind.
• Oil Equipment Mfg. Co., New Haven, Conn.
Packless Metal Products Corp., New Rochelle, N. Y.
Parker Appliance Co., Cleveland.
Scovill Mfg. Co., Waterville Div., Waterville, Conn.
Weatherhead Co., Cleveland.

FITTINGS, HUMIDIFIER, WATER LINE

American Brass Co., Waterbury, Conn.
Hays Mfg. Co., Erie, Pa.
McDonnell & Miller, Inc., Chicago.
• Maid-O'-Mist, Inc., Chicago.
Mueller Brass Co., Port Huron, Mich.
Reichert Float & Mfg. Co., Toledo, O.
Ross Sprinkler Co., Pasadena, Calif.
• Skuttle Manufacturing Co., Detroit.

FLANGING MACHINES

See Machines, Flanging

FLASHINGS, ROOF, PREFABRICATED

Alpha Metals, Inc., Brooklyn.
Barrett Division, Allied Chemical & Dye Corporation, New York City.
Berger Mfg. Div., Republic Steel Co., Canton, Ohio.
Biersach & Niedermeyer Co., Milwaukee.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
• Cheney Industries, Trenton, N. J.
Division Lead Co., Chicago, Ill.
Eagle-Picher Co., Cincinnati.
Edwards Mfg. Co., Inc., Cincinnati.
Figge Mfg. Co., Chicago.
Flemm Lead Company, Inc., Long Island City, N. Y.
Fry Reglet Co., Bremerton, Wash.
• Hussey & Co., C. G., Pittsburgh, Penn. (Copper)
• Inland Steel Products Co., Milwaukee.
Keystone Flashing Company, Philadelphia.
Majestic Flashing Company, Baltimore.
National Lead Company, New York City.
New Delphos Manufacturing Co., Delphos, Ohio.
Overly Mfg. Co., Greensburg, Penn.
Plasteel Products Co., Washington, Pa.
Schoedinger, F. O., Columbus, O.
Simplex Manufacturing Co., Fond du Lac, Wis.
Sisalkraft Co., Chicago.
Vallas, Lionel, Chicago.
Van Noorden Co., E., Boston.
Wheeling Corrugating Company, Wheeling, W. Va.
• Williams-Wallace Co., San Francisco, Calif.
York Corrugating Co., York, Pa.

FLASHINGS, THROUGH-WALL, PREFABRICATED

American Brass Co., Waterbury, Conn. (Copper).
Biersach & Niedermeyer Company, Milwaukee.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
• Cheney Industries, Trenton, N. J.
Figge Mfg. Co., Chicago.
Fry Reglet Company, Bremerton, Wash. (Reglet)
Keystone Flashing Co., Philadelphia, Penn.
Majestic Flashing Company, Baltimore.
New Delphos Manufacturing Co., Delphos, Ohio.
• Revere Copper and Brass Incorporated, New York City.
Sisalkraft Co., Chicago.
Vallas, Lionel, Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Wasco Flashing Co., Cambridge, Mass.

• Advertisement in this issue. See Index to Advertisers, page 95-D.

FLUE GAS ANALYZERS

See Analyzers, CO_2 Portable

FLUX

Soldering

Air Reduction Sales Company, New York City (All).
• Allen Co., Inc., L. B. Chicago, Ill. (All metals)
Alpha Metals, Incorporated, Brooklyn (all metals)
Aluminum Co. of America, Pittsburgh, Penn.
American Chemical Paint Co., Ambler, Pa. (all metals)
American Products Corporation, Chicago (Stainless, Monel, Inconel, Nickel, Nickelchrome, alloys)
American Solder & Flux Co., Philadelphia, Pa. (All metals)
Bastian-Blessing Co., Chicago.
Belmont Smelting & Refining Works, Inc., Brooklyn (Aluminum, Copper, Galvanized steel, Stainless).
Benson Co., Inc., Alex R., Hudson, N. Y. (Salts, Pastes for Copper, Galvanized, Stainless).
Burnley Battery & Mfg. Co., North East, Pa. (Paste, Salts, Solution), (All metals except aluminum and stainless steel)
Carajon Chemical Co., Fremont, Mich. (Copper, galvanized, and stainless steel)
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Diener Mfg. Co., Geo. W., Chicago.
Division Lead Co., Chicago, Ill. (All metals)
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Cast iron, copper; plain, stainless, galv., and tinned steel)
Eutectic Weld.ng Alloys Co., New York, N. Y. (Aluminum, copper, galv. & stainless steel)
Farrelloy Co., Philadelphia, Penn. (All metals)
Flux-All Chemical Products, New York City, (Stainless, Copper, Galvanized, Aluminum).
Fusion Engineering, Cleveland, Ohio. (All metals)
Garden City Laboratory, Inc., Chicago (Galvanized Iron).
General Electric Co., Bridgeport, Conn.
Glaser Lead Co., Inc., Brooklyn (Every purpose).
Handy & Harman, New York, N. Y. (Brass, bronze & nickel alloys)
Industrial Service Laboratories, Milwaukee (Stainless, Galvanized iron, Copper).
• Johnson Gas Appliance Co., Cedar Rapids, Iowa.
Johnson Mfg. Co., Inc., Mount Vernon, Iowa. (Aluminum, copper, galvanized iron, stainless steel)
Kester Solder Co., Chicago, Ill. (Aluminum, copper, galvanized & stainless steel)
Kirk & Son, Morris P., Los Angeles.
Klem Chemicals, Inc., Dearborn, Mich. (Copper, iron, stainless steel)
Lake Chemical Company, Chicago.
• Langsenkamp Co., F. H., Indianapolis, Ind. (Stainless steel)
Lenk Mfg. Co., Boston, Mass. (Copper; galvanized, and stainless steel)
Lewis Laboratories, Inc., Paul, Milwaukee (Low Tin Content).
Linde Air Products Co., New York, N. Y. (Bronze, cast iron & stainless steel)
Lukens Metal Co., Thos. F., Philadelphia (Copper, Galvanized Iron, Stainless Steel).
National Cylinder Gas Co., Chicago, Ill. (All metals)
National Lead Co., New York, N. Y. (All metals)
Nelson Chemical Co., Detroit (For Steel).
Pfanstiehl Chemical Co., Waukegan, Ill. (Copper, galv. iron, stainless steel)
Potomac Mfg. Co., Philadelphia, Penn. (Aluminum, copper, galv. & stainless steel)
• Reiner & Campbell Co., Inc., Elizabeth, N. J.
• Ruby Chemical Co., Columbus, Ohio. (Copper, galv. & stainless steel)
Sherman & Co., Flushing, N. Y. (Galv. & stainless steel)
Smith Welding Equipment Corp., Minneapolis, Minn.
S.O.S. Products Co., Inc., Brooklyn, N. Y. (All metals)
Superior Flux & Mfg. Co., Cleveland, Ohio. (All metals)
Technical Processes Div. Colonial Alloys Co., Philadelphia (Aluminum)
Tinit Manufacturing Co., Denver, Colo. (All metals).
Turco Products, Inc., Los Angeles.
United Wire & Supply Corp, Providence, R. I. (Copper & ferrous alloys)
Universal Welder Corporation, Cleveland.
Wall Chemicals Div., Liquid Carbonic Corporation, Chicago.
Wolfe-Kote Co., Sheboygan, Wis.

Welding

Aluminum Co. of America, Pittsburgh, Penn.
American Solder & Flux Co., Philadelphia, Penn.
Eutectic Welding Alloys Corp., New York, N. Y.
Farrelloy Co., Los Angeles, Calif. (Also brazing)
Midland Paint & Varnish Co., Cleveland, Ohio.
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Flux & Mfg. Co., Cleveland, Ohio.
Tinit Mfg. Co., Inc., Denver, Colo.

FUEL OIL FILTERS

See Filters, Fuel Oil

FURNACE BLOWERS

See Blowers; Blower-Filter Units; Blower-Washer Units

FURNACE CEMENT

See Cement, Furnace

FURNACE CLEANERS

See Cleaners, Vacuum, Furnace

FURNACE LINING

See Refractories

FURNACE PIPE

See Pipe, Furnace

FURNACE PIPE FITTINGS AND ACCESSORIES

See Fittings and Accessories, Furnace Pipe

FURNACE REGULATORS

See Regulators, Furnace Draft, Mechanical; Controls

FURNACE REPAIRS

See Repairs, Stove and Furnace

FURNACES, SOLDERING

Acme Electric Heating Co., Inc., Boston (electric)
Aeroil Products Co., Inc., South Hackensack, N. J.
Berns Co., Otto, Rochester, N. Y.
• Clayton & Lambert Mfg. Co., Louisville, Ky.
Diener Mfg. Co., Geo. W., Chicago.
Eclipse Fuel Engineering Co., Rockford, Ill.
Fieser Company, F. J., New York City.
Fusion Engineering, Cleveland.
Goss Gas Products Co., Pittsburgh, Penn.
Hones, Inc., Charles A., Baldwin, N. Y. (Gas).
• Inland Steel Products Co., Milwaukee.
Insto-Gas Corporation, Detroit. (Gas)
• Johnson Gas Appliance Co., Cedar Rapids, Ia.
Met Sales Co., Rockford, Ill.
Mutual Liquid Gas & Equipment Co., Inglewood, Calif.
• Reiner & Campbell Co., Inc., Elizabeth, N. J.
Reliable Gas Products Co., Cedar Rapids, Ia.
Sanders, J. A., Fulton, N. Y.
Turner Brass Works, Sycamore, Ill.
Unique Manufacturing Co., Inc., Chicago. (Gasoline, kerosene).
Vulcan Electric Co., Danvers, Mass. (electric)
Weiss & Co., H., New York City.
Westinghouse Electric Corporation, Pittsburgh, Pa.

FURNACES, WARM AIR, GRAVITY

Cast, Cast Iron

Agricola Furnace Co., Inc., Gadsden, Ala.
• Airtemp Div., Chrysler Corp., Dayton, O.
American Foundry & Furnace Co., Bloomington, Ill.
• American Furnace Co., St. Louis.
American Furnace & Foundry Co., Milan, Mich.
• American Radiator & Standard Sanitary Corp., Pittsburgh.
Boyce Furnace Works, Waterloo, Ia.
Crane Company, Chicago.
Edwards Furnace Co., Wellsboro, Pa.
Excelsior Steel Furnace Co., Chicago.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farris Furnace Co., Springfield, Ill.
Favorite Stove Co., Piqua, O.
Forest City Foundries Co., Cleveland.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis
Green Colonial Furnace Co., Des Moines, Ia.
Hare Engineering Co., Detroit.
Hart Furnace and Supply Co., Louisville, Ky.
• Henry Furnace Co., Medina, O.
• Hess-Snyder Co., Massillon, O.
Home Furnace Co., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Independence Stove & Furnace Co., Independence, Mo.
International Heater Co., Utica, N. Y.
Katelman Foundry & Mfg. Co., Council Bluffs, Iowa.
Keith Furnace Co., Des Moines, Ia.
Kelsey Heating Co., Syracuse, N. Y.
MaGiri Foundry & Furnace Co., Bloomington, Ill.
• Majestic Co., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
• May-Fiebeger Co., Newark, O.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee, Wis.
• National Heater Company, St. Paul, Minn.
• Olsen Mfg. Co., C. A., Elyria, Ohio.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

FURNACES, WARM AIR, GRAVITY—(Cont'd)

Fittston Stove Co., Pittston, Pa.
Portland Stove Foundry Co., Portland, Me.
• Premier Furnace Co., Dowagiac, Mich.
• Round Oak Co., Inc., of Ind., Dowagiac, Mich.
• Rybolt Heater Co., Ashland, O.
St. Clair Foundry Corp., Centralia, Ill.
Schill Mfg. Co., Crestline, O.
• Schwab Furnace Co., Milwaukee, Wis.
Spear Stove and Heater Co., James, Philadelphia.
• Thatcher Furnace Co., Garwood, N. J.
• Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
• Union Manufacturing Co., Inc., Boyertown, Pa.
United States Radiator Corp., Detroit, Mich.
Westwick & Son, Inc., John, Galena, Ill.
• Williamson Heater Co., Cincinnati.
• Wise Furnace Co., Akron, O.
• XXth Century Heating & Ventilating Co., Akron, O.

Coal, Steel

• Airtemp Div., Chrysler Corp., Dayton, O.
Airwasher Corporation, Eaton Rapids, Mich.
• American Furnace Co., St. Louis, Mo.
American Furnace & Foundry Co., Milan, Mich.
• American Radiator and Standard Sanitary Corp., Pittsburgh.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis.
Arcweld Mfg. Co., Inc., Seattle, Wash.
• Armstrong Furnace Co., Columbus, O.
Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
• Bard Manufacturing Co., Bryan, O.
Berger Furnace Mfg. Co., Pittsburgh.
Bovee Furnace Works, Waterloo, Ia.
• Brenner Co., Jacob, Fond du Lac, Wis.
Campbell Heating Co., Des Moines, Ia.
• Certified Furnace Company, St. Paul, Minn.
• Conco Engineering Works, Mendota, Ill.
Crane Co., Chicago, Ill.
Daniels Mfg. Co., Inc., Sam., Hardwick, Vt.
Deshler Foundry & Mach. Wks., Deshler, O.
• Dowagiac Steel Furnace Co., Dowagiac, Mich.
• Dual-X Furnace Mfg. Co., Chicago, Ill.
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Cleveland, O.
Friendly Furnace & Foundry Co., Sioux City, Ia.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
• Furbio Co., Hermansville, Mich.
Gross-Aire Mfg. Co., St. Louis, Mo.
• Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corporation, Oneida, N. Y.
Hart Furnace and Supply Co., Louisville, Ky.
• Henry Furnace Company, Medina, O.
• Hess-Snyder Co., Massillon, O.
• Hess Co., Chicago, Ill.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Ingersoll Steel Div., Borg-Warner Corp., Chicago.
International Heater Co., Utica, N. Y.
• Jackson & Church Co., Saginaw, Mich.
Joliet Heating Corp., Joliet, Ill.
Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
Keith Furnace Co., Des Moines, Ia.
Lennox Furnace Co., Marshalltown, Ia.
Locke Stove Co., Kansas City, Mo.
McPherson Furnace & Supply Co., Portland, Ore.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
• Majestic Co., Huntington, Ind.
• May-Fiebeger Co., Newark, O.
• Mayflower Air Conditioners, Inc., St. Paul, Minn.
• Meyer Furnace Co., Peoria, Ill.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee, Wis.
• National Heater Company, St. Paul, Minn.
• Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Nugent Furnaces, Thos., New York City.
• Olsen Mfg. Co., C. A., Elyria, O.
• Peerless Foundry Co., Indianapolis, Ind.
Portland Stove Foundry Co., Portland, Me.
• Premier Furnace Co., Dowagiac, Mich.
• Radiation Furnace Corp., Benton Harbor, Mich.
Roseabrauch Co., W. W., Salem, Ore.
• Round Oak Co., Inc., of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Penn.
• Rybolt Heater Co., Ashland, O.
St. Louis Furnace Mfg. Co., St. Louis.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, O.
• Schwab Furnace Co., Milwaukee.
Stokol Stoker Company, Inc., Dayton, Ohio.
Sure Comfort Furnace Co., Forest Park, Ill.
• Syncromatic Corporation, Watertown, Wis.
• Thatcher Furnace Company, Garwood, N. J.
• Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Tri-State Heating Supply Inc., Fort Wayne, Ind.
United States Radiator Corp., Detroit.
• Viking Mfg. Corp., Cleveland, Ohio.
• Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Westwick & Son, Inc., John, Galena, Ill.
• Wheeling Furnace Corporation, Martins Ferry, O.
Will-Burt Co., Orrville, Ohio.
• Williamson Heater Co., Cincinnati.
• Wise Furnace Co., Akron, Ohio.
Worsham Company, Incorporated, St. Louis. (Smokeless)

Electric

Gray & Dudley Co., Nashville, Tenn. (floor furnace)
Hull Enterprises, Los Angeles, Calif.

Floor, Gas

Advance Furnace Co., Wichita, Kansas.
Air Products, Inc., Pittsburgh, Kans.
Allied Heating & Air Conditioning Co., Lawndale, Calif.
American Metal Products Co., Ft. Worth, Texas.
• American Radiator & Standard Sanitary Corp., Pittsburgh.
Anchor Burner Co., Oklahoma City, Okla.
Andrews Heater Co., Los Angeles.
Atlas Heating and Ventilating Co., Ltd., San Francisco.
• Barnes Heating and Ventilating Co., Long Beach, Cal.
Beck Engineering Combustion Kompany, St. Louis.
Bryant Heater Div., Cleveland, Ohio.
Central States Mfg. Co., Inc., Arkansas City, Kan.
Cole Hot Blast Manufacturing Co., Chicago.
Coleman Co., Inc., Wichita, Kans.
Commonwealth Company, Alhambra, Calif.
Dearborn Stove Co., Dallas, Texas.
Deluxe Furnace & Wall Heater Co., Inglewood, Calif.
Empire Stove Co., Belleville, Ill.
Ford Blow Pipe & Manufacturing Co., Memphis, Tenn.
Fraser & Johnston Co., San Francisco.
General Wesco Stove Co., Springfield, Mo.
Hammel Radiator Engineering Co., Los Angeles.
Hart-Mun Furnace Co., Tulsa, Okla.
Heating Equipment Mfg. Co., San Francisco, Calif.
Holly Manufacturing Co., Pasadena, Calif.
Hotstream Heater Co., Cleveland.
Ideal Heating Corporation, Los Angeles.
International Sales Co., San Francisco.
Johnston Gas Furnace Corporation, Ltd., North Hollywood, Calif.
King Metal Co., Oklahoma City, Okla.
Lawson Manufacturing Co., Pittsburgh.
Lennox Furnace Co., Marshalltown, Iowa.
Mahl Manufacturing Co., Huntington Park, Calif.
Miller Floor Furnace Co., Oakland, Calif.
Monarch Heating Co., Los Angeles.
Moncrief Furnace & Mfg. Co., Inc., Dallas, Tex.
• Mulkey Co., J. F., Detroit.
• Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
Pacific Gas Heating Co., San Francisco.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Rheem Manufacturing Company, New York City.
• Royal Heaters, Inc., Alhambra, Calif.
Samuel Stamping & Enameling Company, Chattanooga, Tenn.
Santa Clara Metal Products Co., Santa Clara, Calif.
• Security Manufacturing Co., Kansas City, Mo.
• Sequoia Manufacturing Co., San Carlos, Calif.
Stephens Mfg. Co., Tulsa, Okla.
Sunshine Mantle Co., Chanute, Kansas.
Tennessee Enamel Mfg. Co., Nashville, Tenn.
U-Ni-Matic Heating Systems, Inc., Los Angeles.
Universal Metal Products, Alhambra, Calif.
• Utility Appliance Corporation, Los Angeles.
• Viking Manufacturing Corp., Cleveland, Ohio.
Ward Heater Co., Los Angeles, Calif.
Wylie, W. O., Los Angeles.
• Zink Co., John, Tulsa, Okla.

Floor, Oil

American Radiator & Standard Sanitary Corp., Pittsburgh, Penn.
Auburn Burner Co., Auburn, Ind.
Beyer Oil Burner Co., Rosamond, Calif.
Bone Tool & Gauge Co., Detroit, Mich.
Calimode, Inc., Atlanta, Ga.
Coleman Co. Inc., Wichita, Kans.
Consolidated Industries, Inc., Lafayette, Ind.
Domestic Mfg. Co., Seattle, Wash.
Evans Products Co., Plymouth, Mich.
Gilen Co., J. L., Dowagiac, Mich.
Heating Equipment Mfg. Co., San Francisco, Calif.
Jackson G. Gilmore & Co., Columbus, Ohio.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Little Burner Co. Inc., H. C., San Rafael, Calif.
Mulkey Co., J. F., Detroit, Mich.

• Advertisement in this issue. See Index to Advertisers, page 93-D.

FURNACES, WARM AIR, GRAVITY—(Cont'd)

- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Northwest Metal Products, Inc., Seattle, Wash.
- Oran Co., Columbus, Ohio.
- Quaker Mfg. Co., Chicago, Ill.
- Sequoia Mfg. Co., San Carlos, Calif.
- Stoker-Lad Co., Tacoma, Wash.
- Therm Oil Burner Co., Seattle, Wash.
- Thermo-Products, Inc., North Judson, Ind.
- United Air Heaters, Inc., Seattle, Wash.
- Viking Mfg. Corp., Cleveland, Ohio.

Gas, Cast Iron

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- American Foundry & Furnace Co., Bloomington, Ill.
- American Furnace Co., St. Louis, Mo.
- Coroaire Heater Corp., Cleveland, Ohio.
- Favorite Stove Co., Piqua, O.
- Firewel Co., Inc., Buffalo, N. Y.
- Forest City Foundries Co., Cleveland, O.
- Henry Furnace Company, Medina, O.
- Hess-Snyder Co., Massillon, O.
- International Heater Co., Utica, N. Y.
- Kelsey Heating Co., Syracuse, N. Y.
- Marshall Furnace Co., Marshall, Mich.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Olsen Manufacturing Co., C. A., Elyria, O.
- Rybolt Heater Company, Ashland, O.
- Silver Flame, Inc., Detroit.
- Sioux City Foundry & Boiler Co., Sioux City, Ia.
- Surface Combustion Corp., Toledo, Ohio.
- Twin City Gas Specialty Co., Minneapolis, Minn.
- Wise Furnace Co., Akron, O.
- XXth Century Heating & Ventilating Co., Akron, O.

Gas, Steel

- Advance Furnace Co., Wichita, Kansas.
- Airtemp Div., Chrysler Corporation, Dayton, O.
- Aladdin Heating Corp., Oakland, Calif.
- All-Gas Equipment Co., Milwaukee, Wis.
- American Furnace Co., St. Louis, Mo.
- American Furnace & Foundry Co., Milan, Mich.
- American Radiator and Standard Sanitary Corp., Pittsburgh.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Andrews Heating Co., Minneapolis.
- Andrews-Schroeder Heating Co., Inc., Glendale, Calif.
- Armstrong Furnace Co., Columbus, O.
- Automatic Firing Corporation, St. Louis, Mo.
- Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
- Bard Manufacturing Company, Bryan, Ohio.
- Beck Engineering Combustion Kompany, St. Louis.
- Berger Furnace Mfg. Co., Pittsburgh.
- Brown Steel Tank Co., Minneapolis.
- Bryant Corporation, C. L., Cleveland.
- Bryant Heater Div., Cleveland, Ohio.
- Campbell Heating Co., Des Moines, Ia.
- Chandler Co., Cedar Rapids, Iowa.
- Coleman Co., Inc., Wichita, Kans.
- Conco Engineering Works, Mendota, Ill.
- Dornback Furnace & Foundry Co., Cleveland.
- Excelsior Stove Mfg. Co., Quincy, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Forest City Foundries Co., Cleveland, O.
- Fraser and Johnston Co., San Francisco.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Green Colonial Furnace Co., Des Moines, Ia.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Hammel Radiator Engineering Co., Los Angeles.
- Heating Specialties Co., Baltimore. (Stainless)
- Henry Furnace Company, Medina, O.
- Holly Manufacturing Co., Pasadena, Calif.
- Hotentot Company, Inc., Omaha, Nebr.
- Independence Stove & Furnace Co., Independence, Mo.
- International Heater Co., Utica, N. Y.
- International Oil Burner Co., St. Louis, Mo.
- International Sales Co., San Francisco.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Kleenair Furnace Co., Portland, Ore.
- Ko-Z-Aire, Inc., Red Oak, Iowa.
- Lennox Furnace Co., Marshalltown, Ia.
- Lundt, Inc., Ernest C., Little Falls, N. J.
- May-Fiebeger Co., Newark, O.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Meyer Furnace Co., Peoria, Ill.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Norman Products Co., Inc., Columbus, Ohio.
- Nugent Furnaces, Thomas, New York City.
- Olsen Mfg. Co., C. A., Elyria, O.
- Pacific Gas Heating Company, San Francisco.
- Patten Co., J. V., Sycamore, Ill.
- Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Peerless Foundry Co., Indianapolis, Ind.
- Pennsylvania Furnace & Iron Co., Warren, Pa.
- Perfection Stove Co., Cleveland, Ohio.
- Rheem Manufacturing Co., New York City.
- Ruby Management Co., Pittsburgh, Penn.
- Rybolt Heater Co., Ashland, O.
- St. Louis Furnace Mfg. Co., St. Louis.
- Schill Mfg. Co., Crestline, Ohio.
- Schwab Furnace Co., Milwaukee, Wis.
- Scott-Newcomb, Inc., St. Louis, Mo.
- Security Manufacturing Co., Kansas City, Mo.
- Sequoia Manufacturing Co., San Carlos, Calif.
- Stewart Co., W. H., Oklahoma City, Okla.
- Stokol Stoker Company, Inc., Dayton, Ohio.
- Sure Comfort Furnace Co., Forest Park, Ill.
- Surface Combustion Corp., Toledo, Ohio.
- Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
- United States Radiator Corp., Detroit.
- Waterman-Waterbury Co., Minneapolis, Minn.
- Will-Burt Co., Orrville, Ohio.
- Williamson Heater Co., Cincinnati.
- Wise Furnace Co., Akron, Ohio.
- York-Shipley, Inc., York, Penn.

Gas-Oil, Combination, Steel

- Automatic Firing Corp., St. Louis, Mo.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Henry Furnace Co., Medina, Ohio.
- Norman Products Co., Inc., Columbus, Ohio.

Liquid Petroleum Gas, Cast Iron

- Twin City Gas Specialty Co., Minneapolis, Minn.
- XXth Century Heating & Ventilating Co., Akron, Ohio.

Liquid Petroleum Gas, Steel

- American Furnace & Foundry Co., Milan, Mich.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Armstrong Furnace Co., Columbus, Ohio.
- Automatic Firing Corp., St. Louis, Mo.
- Bard Mfg. Co., Bryan, Ohio.
- Berger Furnace Mfg. Co., Pittsburgh, Penn.
- Bryant Heater Div., Cleveland, Ohio.
- Bryant Corp., C. L., Cleveland, Ohio.
- Campbell Heating Co., Des Moines, Iowa.
- Chandler Co., Cedar Rapids, Iowa.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Fraser & Johnston Co., San Francisco, Calif.
- Front Rank Furnace Co., St. Louis, Mo.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Henry Furnace Co., Medina, Ohio.
- Hammel Radiator Engineering Co., Los Angeles, Calif.
- Holly Mfg. Co., Pasadena, Calif.
- International Oil Burner Co., St. Louis, Mo.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Lennox Furnace Co., Marshalltown, Ia.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Meyer Furnace Co., Peoria, Ill.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Pacific Gas Heating Co., San Francisco, Calif.
- Patten Co., J. V., Sycamore, Ill.
- Peerless Foundry Co., Indianapolis, Ind.
- Surface Combustion Corp., Toledo, Ohio.
- United States Radiator Corp., Detroit, Mich.
- Waterman-Waterbury Co., Minneapolis, Minn.

Oil, Cast Iron

- American Foundry & Furnace Co., Bloomington, Ill.
- American Furnace & Foundry Co., Milan, Mich.
- Edwards Furnace Co., Wellsboro, Pa.
- International Heater Co., Utica, N. Y.
- Keith Furnace Co., Des Moines, Ia.
- Kelsey Heating Co., Syracuse, N. Y.
- Marshall Furnace Co., Marshall, Mich.
- Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee.
- Sioux City Foundry & Boiler Co., Sioux City, Ia.
- Wise Furnace Company, Akron, O.
- XXth Century Heating & Ventilating Co., Akron, Ohio.

Oil, Steel

- Airtemp Division, Chrysler Corp., Dayton, O.
- Airwasher Corporation, Eaton Rapids, Mich.
- All-Gas Equipment Co., Milwaukee.
- American Furnace Co., St. Louis.
- American Furnace & Foundry Co., Milan, Mich.
- American Gas Machine Co., Albert Lea, Minn.
- American Radiator & Standard Sanitary Corp., Pittsburgh.
- American Stove Co., Lorain Div., Lorain, Ohio.
- Andrews Heating Co., Minneapolis.
- Arcweld Mfg. Co., Inc., Seattle, Wash.
- Automatic Firing Corporation, St. Louis, Mo.
- Automatic Furnace Company, Lansing, Mich.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

FURNACES, WARM AIR, GRAVITY—(Cont'd)

Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
Bard Manufacturing Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis.
Berger Furnace Manufacturing Company, Pittsburgh.
Beyer Oil Burner Co., Rosamond, Calif.
Bovee Furnace Works, Waterloo, Ia.
Brown Steel Tank Co., Minneapolis.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div., Cleveland, Ohio.
Calimode, Inc., Atlanta, Ga.
Campbell Heating Co., Des Moines, Ia.
Cary Mfg. Co., Waupaca, Wis.
• Certified Furnace Company, St. Paul, Minn.
Coleman Co., Inc., Wichita, Kans.
Daniels Mfg. Co., Inc., Sam Hardwick, Vt.
Duo-Therm Div., Motor Wheel Corporation, Lansing, Mich.
Evans Products Co., Heating & Appliance Div., Plymouth, Mich.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, O.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Cleveland.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
• Furbio Co., Hermansville, Mich.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
• Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corporation, Oneida, N. Y.
Heating Specialties Co., Baltimore, Md. (Stainless)
• Henry Furnace Co., Medina, O.
• Hess Co., Chicago, Ill.
Hotentot Co., Inc., Omaha, Nebr.
• International Oil Burner Co., St. Louis, Mo.
Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
Keith Furnace Co., Des Moines, Ia.
Kleenair Furnace Co., Portland, Ore.
• Ko-Z-Aire, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Lennox Furnace Co., Marshalltown, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
McKee Air Conditioning Company, Minneapolis.
• Majestic Co., Huntington, Ind.
• May-Fiebeger Co., Newark, O.
• Mayflower Air Conditioners, Inc., St. Paul, Minn.
• Meyer Furnace Co., Peoria, Ill.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Montag Stove & Furnace Works, Portland, Ore.
• Morrison Steel Products, Inc., Buffalo, N. Y.
• Mueller Furnace Co., L. J., Milwaukee.
• Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
• Norwalk Air Conditioning Corp., South Norwalk, Conn.
Nugent Furnaces, Thomas, New York City.
• Nu-Way Corp., Rock Island, Ill.
• Olsen Mfg. Co., C. A., Elyria, O.
• Patten Co., J. V., Sycamore, Ill.
• Peerless Foundry Co., Indianapolis.
Perfection Stove Co., Cleveland, Ohio.
Portland Stove Foundry Co., Portland, Me.
• Premier Furnace Co., Dowagiac, Mich.
Quaker Manufacturing Co., Chicago, Ill.
Quincy Stove Manufacturing Co., Quincy, Ill.
Rosebraugh Co., W. W., Salem, Ore.
• Round Oak Co., Inc. of Ind., Dowagiac, Mich.
• Rybolt Heater Co., Ashland, O.
Sandberg Mfg. Co., Portland, Ore.
• Schwab Furnace Co., Milwaukee, Wis.
Schwab Safe Company, Lafayette, Ind.
Scott-Newcomb, Inc., St. Louis.
Silver Flame Industries, Inc., Detroit.
Stokol Stoker Company, Inc., Dayton, Ohio.
Sure Comfort Furnace Co., Forest Park, Ill.
• Syncromatic Corporation, Watertown, Wis.
• Thatcher Furnace Co., Garwood, N. J.
United States Radiator Corp., Detroit.
• Viking Manufacturing Corp., Cleveland, Ohio.
• Waterman-Waterbury Co., Minneapolis.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Western Blower Co., Seattle, Wash.
• Williamson Heater Co., Cincinnati.
York-Shipley, Inc., York, Penn.

Pipeless, Cast Iron

Agricola Furnace Co., Inc., Gadsden, Ala.
American Furnace & Foundry Co., Milan, Mich.
• American Radiator & Standard Sanitary Corp., Pittsburgh.
Edwards Furnace Co., Wellsboro, Pa.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Favorite Stove Co., Piqua, O.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
Gross-Aire Mfg. Co., St. Louis, Mo.
• Henry Furnace Co., Medina, O.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Independence Stove & Furnace Co., Independence, Mo.
International Heater Co., Utica, N. Y.
Keith Furnace Co., Des Moines, Ia.
Kelsey Heating Co., Syracuse, N. Y.
MaGiri Foundry & Furnace Co., Bloomington, Ill.
Marshall Furnace Co., Marshall, Mich.
• May-Fiebeger Co., Newark, O.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee.
Portland Stove Foundry Co., Portland, Me.
• Premier Furnace Co., Dowagiac, Mich.
• Rybolt Heater Co., Ashland, Ohio.
St. Clair Foundry Corp., Centralia, Ill.
Schill Mfg. Co., Crestline, O.
• Schwab Furnace Co., Milwaukee.
Spear Stove & Heater Co., James, Philadelphia.
Stiglitz Furnace & Foundry Co., Louisville, Ky.
United States Radiator Corp., Detroit.
Westwick & Son, Inc., John, Galena, Ill.
• Wise Furnace Co., Akron, O.
• XXth Century Heating & Ventilating Co., Akron, O.

Pipeless, Steel

Airwasher Corporation, Eaton Rapids, Mich.
American Furnace & Foundry Company, Milan, Mich.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis.
• Armstrong Furnace Co., Columbus, O.
Berger Furnace Mfg. Co., Pittsburgh, Penn.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hart & Crouse Corporation, Oneida, N. Y.
• Hess Co., Chicago, Ill.
International Heater Co., Utica, N. Y.
• Jackson & Church Co., Saginaw, Mich.
Kehm Corporation, Chicago, Ill.
Keith Furnace Co., Des Moines, Ia.
Kelsey Heating Co., Syracuse, N. Y.
Lennox Furnace Co., Marshalltown, Ia.
• May-Fiebeger Co., Newark, O.
Montag Stove & Furnace Works, Portland, Ore.
Northwest Foundry & Furnace Co., Portland, Ore.
Nugent Furnaces, Thos., New York City.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Rosebraugh Co., W. W., Salem, Ore.
• Schwab Furnace Co., Milwaukee.
Stiglitz Furnace & Foundry Co., Louisville, Ky.
• Thatcher Furnace Company, Garwood, N. J.
United States Radiator Corp., Detroit.
• Waterman-Waterbury Co., Minneapolis, Minn.

Stoker, Cast Iron

Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Bovee Furnace Works, Waterloo, Ia.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Forest City Foundries Co., Cleveland.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
Gross-Aire Mfg. Co., St. Louis, Mo.
Keith Furnace Co., Des Moines, Ia.
Kelsey Heating Co., Inc., Syracuse, N. Y.
• Majestic Co., Huntington, Ind.
Marshall Furnace Co., Marshall, Mich.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee, Wis.
• Premier Furnace Co., Dowagiac, Mich.

Stoker, Steel

• American Furnace Co., St. Louis.
• American Radiator & Standard Sanitary Corp., Pittsburgh.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis.
Arcweld Mfg. Co., Seattle, Wash.
• Armstrong Furnace Co., Columbus, O.
Beck Engineering Combustion Kompany, St. Louis.
Campbell Heating Co., Des Moines, Ia.
• Certified Furnace Company, St. Paul, Minn.
• Conco Engineering Works, Mendota, Ill.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
Gross-Aire Mfg. Co., St. Louis, Mo.
• Hall-Neal Furnace Co., Indianapolis, Ind.
• Henry Furnace Co., Medina, O.
• Hess Co., Chicago, Ill.
• Jackson & Church Co., Saginaw, Mich.
Keith Furnace Co., Des Moines, Ia.
Lennox Furnace Co., Marshalltown, Ia.
• Majestic Co., Huntington, Ind.
• May-Fiebeger Co., Newark, O.
• Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Foundry & Furnace Co., Portland, Ore.
• Olsen Mfg. Co., C. A., Elyria, O.
• Premier Furnace Co., Dowagiac, Mich.
Rheem Manufacturing Company, New York City.
• Round Oak Co., Inc. of Ind., Dowagiac, Mich.

• Advertisement in this issue. See Index to Advertisers, page 95-D.

FURNACES, WARM AIR, GRAVITY—(Cont'd)

- Rybolt Heater Co., Ashland, O.
- St. Louis Furnace Mfg. Co., St. Louis.
- Sun-Fire Stoker Corporation, New Albany, Ind.
- Syncromatic Corporation, Watertown, Wis.
- Thatcher Furnace Co., Garwood, N. J.
- Waterman-Waterbury Co., Minneapolis.
- Williamson Heater Co., Cincinnati.

Wall

A. C. Co., Los Angeles, Calif. (Gas)
Alcon Engineering Co., San Diego, Calif. (Gas)
Andrews Heater Co., Los Angeles, Calif. (Gas)
Beyer Oil Burner Co., Rosamond, Calif. (Oil)
Bryant Heater Div., Cleveland, Ohio. (Gas)
Commonwealth Company, Alhambra, Calif.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
Electromode Corporation, Rochester, N. Y., (Electric)
Folsom Company, Inc., Dallas, Tex. (Gas)
Form-Weld Co., Inc., San Francisco. (LP, Nat. Gas)
General Gas Light Co., Kalamazoo, Mich. (Gas)
Hammel Radiator Engineering Company, Los Angeles (Gas).
Heating Equipment Mfg. Co., San Francisco, Calif.
Heating Research Corporation, Muncie, Ind. (Gas)
Hirsh Manufacturing Co., Garland, Texas. (Gas)
Holly Mfg. Co., Pasadena, Calif. (Gas)
Ideal Heating Corporation, Los Angeles (Gas)
International Sales Co., San Francisco (Gas).
- Kresky Mfg. Co., Inc., Petaluma, Calif. (Oil)

Lawson Manufacturing Co., Pittsburgh, Penn. (Gas)
Little Burner Co., Inc., H. C., San Rafael, Calif. (Oil)
Mahl Manufacturing Co., Huntington Park, Calif. (Gas)
Northwest Heating Inc., Portland, Ore.
O'Keefe & Merritt Co., Los Angeles. (Gas)
- Palmer Mfg. Corp., Phoenix, Ariz. (Gas)

Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Pioneer Water Heater Corp., Los Angeles, Calif.
Rheem Mfg. Co., New York City (Gas).
- Royal Heaters, Inc., Alhambra, Calif. (Gas)

Sanitaire Company, Los Angeles, Calif. (Gas)
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif. (Electric)
U-Ni-Matic Heating Systems, Inc., Los Angeles (Gas).
Universal Metal Products, Alhambra, Calif. (Gas)
Williams Radiator Company, Glendale, Calif. (Gas)
- Zink Co., John, Tulsa, Okla. (Nat., L. P. & Mfg. Gas)

Wood Burning, Cast Iron

Excelsior Stove & Mfg. Co., Quincy, Ill.
Homer Furnace & Foundry Corp., Coldwater, Mich.
International Heater Co., Utica, N. Y.
Keith Furnace Co., Des Moines, Ia.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
- Majestic Co., Huntington, Ind.

Moncrief Furnace & Mfg. Co., Dallas, Tex.
Montag Stove & Furnace Works, Portland, Ore.
Portland Stove Foundry Co., Portland, Me.
- Schwab Furnace Co., Milwaukee.

Wood Burning, Steel

Andrews Heating Co., Minneapolis.
Arcweld Manufacturing Co., Inc., Seattle, Wash.
Bovee Furnace Works, Waterloo, Ia.
Campbell Heating Co., Des Moines, Ia.
Campbell Heating Co., E. K., Kansas City, Mo.
- Certified Furnace Company, St. Paul, Minn.

Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Excelsior Stove & Mfg. Co., Quincy, Ill.
- Furbio Co., Hermansville, Mich.

Gross-Aire Mfg. Co., St. Louis, Mo.
Hart & Crouse Corporation, Oneida, N. Y.
- Jackson & Church Co., Saginaw, Mich.

Kleenair Furnace Co., Portland, Ore.
Lennox Furnace Co., Marshalltown, Ia.
McPherson Furnace & Supply Co., Portland, Ore. (Also Sawdust)
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Moncrief Furnace & Mfg. Co., Dallas ,Tex.
Montag Stove & Furnace Works, Portland, Ore.
- National Heater Company, St. Paul, Minn.

Northwest Foundry & Furnace Co., Portland, Ore.
Nugent Furnaces, Thomas, New York City.
Rosebraugh Co., W. W., Salem, Ore.
Sandberg Mfg. Co., Portland, Ore. (Sawdust)
- Syncromatic Corporation, Watertown, Wis.

FURNACES, WINTER AIR CONDITIONING

Attic Type

- American Furnace Co., St. Louis. (Oil or gas)

Firewel Co., Inc., Buffalo, N. Y. (Gas)
Fraser & Johnston Co., San Francisco, Calif.
International Sales Co., San Francisco. (Gas)
Jet-Heet, Inc., Englewood, N. J. (Gas or oil)
Lennox Furnace Co., Marshalltown, Iowa (Gas).
- Meyer Furnace Company, Peoria, Ill.

Norman Products Co., Inc., Columbus, Ohio.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Surface Combustion Corp., Toledo, Ohio. (Gas)
- Zink Co., John, Tulsa, Okla. (Nat., Mfg., L P Gas)

Coal, Cast Iron

Agricola Furnace Co., Inc., Gadsden, Ala.
- Airtemp Div., Chrysler Corp., Dayton, O.

American Foundry & Furnace Co., Bloomington, Ill.
American Furnace & Foundry Co., Milan, Mich.
Bovee Furnace Works, Waterloo, Ia.
Chandler Co., Cedar Rapids, Ia.
Crane Co., Chicago, Ill.
Excelsior Steel Furnace Co., Chicago.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farris Furnace Company, Springfield, Ill.
Forest City Foundries Co., Cleveland.
Green Colonial Furnace Co., Des Moines, Ia.
- Henry Furnace Company, Medina, Ohio.
- Hess-Snyder Co., Massillon, O.

Home Furnace Co., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
International Heater Co., Utica, N. Y.
Kehm Corporation, Chicago.
Keith Furnace Co., Des Moines, Ia.
Kelsey Heating Co., Inc., Syracuse, N. Y.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
- Majestic Co., Huntington, Ind.

Marshall Furnace Co., Marshall, Mich.
- May-Fiebeger Co., Newark, O.

Montag Stove & Furnace Works, Portland, Ore.
- Mueller Furnace Co., L. J., Milwaukee.
- National Heater Company, St. Paul, Minn.
- Olsen Mfg. Co., C. A., Elyria, O.
- Premier Furnace Co., Dowagiac, Mich.
- Round Oak Co., Inc. of Ind., Dowagiac, Mich.
- Rybolt Heater Co., Ashland, O.

Schill Mfg. Co., Crestline, O.
- Schwab Furnace Co., Milwaukee.

Spear Stove & Heater Co., James, Philadelphia.
- Thatcher Furnace Co., Garwood, N. J.
- Union Mfg. Co., Inc., Boyertown, Penn.

United States Radiator Corp., Detroit, Mich.
Westwick & son, Inc., John, Galena, Ill.
- Williamson Heater Co., Cincinnati.
- Wise Furnace Co., Akron, O.
- XXth Century Heating & Ventilating Co., Akron, O.

Coal, Steel

Airwasher Corporation, Eaton Rapids, Mich.
- Airtemp Div., Chrysler Corp., Dayton, O.
- American Furnace Co., St. Louis.

American Furnace & Foundry Co., Milan, Mich.
- American Radiator and Standard Sanitary Corp., Pittsburgh.

Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis.
Arcweld Manufacturing Co., Inc., Seattle, Wash.
- Armstrong Furnace Co., Columbus, O.

Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
Bard Manufacturing Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis.
Berger Furnace Mfg. Co., Pittsburgh.
Bovee Furnace Works, Waterloo, Ia.
Campbell Heating Co., Des Moines, Ia.
Campbell Heating Co., E. K., Kansas City, Mo.
- Certified Furnace Company, St. Paul, Mich.

Coal-O-Matic Co., Trucksville, Penn.
- Conco Eng. Wks., Mendota, Ill.

Crane Co., Chicago, Ill.
Deshler Foundry & Machine Works, Deshler, Ohio.
- Dowagiac Steel Furnace Company, Dowagiac, Mich.
- Dual-X Furnace Mfg. Co., Chicago, Ill.

Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Cleveland.
- Front Rank Furnace Company, Div. Liberty Foundry Co., St. Louis.
- Furbio Company, Hermansville, Mich.

Gross-Aire Mfg. Co., St. Louis, Mo.
- Hall-Neal Furnace Co., Indianapolis, Ind.

Hart & Crouse Corp., Oneida, N. Y.
Heatlox Furnaces, Inc., Tacoma, Wash.
- Henry Furnace Company, Medina, Ohio.
- Hess-Snyder Co., Massillon, O.
- Hess Co., Chicago, Ill.

Homer Furnace & Foundry Corp., Coldwater, Mich.
Ingersoll Steel Div., Borg-Warner Corp., Chicago.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland.
- Jackson & Church Co., Saginaw, Mich.

Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Keith Furnace Co., Des Moines, Ia.
Kelsey Heating Co., Inc., Syracuse, N. Y.
Kleenair Furnace Co., Portland, Ore.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Ia.
Locke Stove Co., Kansas City, Mo.
McPherson Furnace & Supply Co., Portland, Ore. (Also sawdust)
• Majestic Co., Huntington, Ind.
• May-Fiebeger Co., Newark, O.
• Meyer Furnace Co., Peoria, Ill.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee.
• National Heater Company, St. Paul, Minn.
• Norge Heat Div., Borg-Warner Corporation, Detroit, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
• Olsen Mfg. Co., C. A., Elyria, O.
Portland Stove Foundry Co., Portland, Me.
Premium Coal & Oil Co., Cincinnati, Ohio.
• Radiation Furnace Corp., Benton Harbor, Mich.
Rosebraugh Co., W. W., Salem, Ore.
• Round Oak Co., Inc., of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Penn.
• Ryholt Heater Co., Ashland, O.
St. Louis Furnace Manufacturing Co., St. Louis.
Sandberg Manufacturing Co., Portland, Ore.
Schill Mfg. Co., Crestline, O.
Smith Heater Co., Peter, Dearborn, Mich.
Souther Iron Co., E. E., St. Louis, Mo.
Sure Comfort Furnace Co., Forest Park, Ill.
• Syncromatic Corporation, Watertown, Wis.
• Torchbest Div., Cleveland Steel Products Corp., Cleveland, Ohio.
United States Radiator Corporation, Detroit.
• Viking Manufacturing Corp., Cleveland, Ohio.
• Waterman-Waterbury Co., Minneapolis.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Westwick & Son, Inc., John, Galena, Ill.
Will-Burt Co., Orrville, Ohio.
• Williamson Heater Co., Cincinnati.
• Wise Furnace Co., Akron, Ohio.

Electric

Gray & Dudley Co., Nashville, Tenn. (basement, utility room)
Heating Assurance, Inc., Spokane, Wash.
Montag Stove & Furnace Works, Portland, Ore.
Northwest Heating, Inc., Portland, Ore.

Gas, Cast Iron

• Airtemp Div., Chrysler Corp., Dayton, O.
American Foundry & Furnace Co., Bloomington, Ill.
• American Furnace Company, St. Louis.
• American Radiator and Standard Sanitary Corp., Pittsburgh.
Andrews Heating Company, Minneapolis.
Beck Engineering Combustion Kompany, St. Louis.
Bryant Heater Div., Cleveland, Ohio.
Coroaire Heater Corporation, Cleveland, Ohio.
Firewel Co., Inc., Buffalo, N. Y.
Forest City Foundries Co., Cleveland, O.
General Electric Co., Bloomfield, N. J.
Green Colonial Furnace Co., Des Moines, Ia.
• Henry Furnace Company, Madison, Ohio.
• Hess-Snyder Co., Massillon, O.
International Heater Co., Utica, N. Y.
Kelsey Heating Co., Inc., Syracuse, N. Y.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Marshall Furnace Co., Marshall, Mich.
Monerief Furnace & Mfg. Co., Dallas, Texas.
• Mueller Furnace Co., L. J., Milwaukee.
• Olsen Manufacturing Co., C. A., Elyria, O.
Pennsylvania Furnace & Iron Co., Warren, Pa.
• Richmond Radiator Co., New York, N. Y.
• Ryholt Heater Co., Ashland, O.
• Schwab Furnace Co., Milwaukee.
• Security Manufacturing Co., Kansas City, Mo.
Silver Flame Inc., Detroit, Mich.
Sioux City Foundry and Boiler Company, Sioux City, Ia.
• Surface Combustion Corp., Toledo, Ohio.
• Thatcher Furnace Co., Garwood, N. J.
Twin City Gas Specialty Co., Minneapolis, Minn.
Vacuum Gas Appliances, Rome, N. Y.
• Viking Manufacturing Corp., Cleveland, Ohio.
• Wise Furnace Co., Akron, O.
• XXth Century Heating & Ventilating Co., Akron, O.

Gas, Steel

Advance Furnace Co., Wichita, Kans.
• Airtemp Div., Chrysler Corp., Dayton, Ohio.
Aladdin Heating Corporation, Oakland, Calif.
• Allan Engineering Co., Walter, Dallas, Texas.
All-Gas Equipment Co., Milwaukee, Wis.
• American Furnace Company, St. Louis.
American Furnace & Foundry Co., Milan, Mich.
• American Radiator and Standard Sanitary Corp., Pittsburgh.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Company, Minneapolis.
Andrews-Schroeder Heating Co., Glendale, Calif.
• Armstrong Furnace Co., Columbus, O.
Auburn Burner Co., Auburn, Ind.
• Automatic Firing Corporation, St. Louis, Mo.
Automatic Furnace Company, Lansing, Mich.
Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
Bard Mfg. Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis.
Berger Furnace Mfg. Co., Pittsburgh.
Brown Steel Tank Co., Minneapolis.
Bryant Corporation, C. L., Cleveland.
Bryant Heater Div., Cleveland, Ohio.
Campbell Heating Company, Des Moines, Ia.
Campbell Heating Co., E. K., Kansas City, Mo.
• Century Engineering Corp., Cedar Rapids, Iowa.
• Certified Furnace Company, St. Paul, Minn.
Chandler Company, Cedar Rapids, Ia.
Coleman Co., Inc., Wichita, Kans.
• Conco Engineering Works, Mendota, Ill.
Columbia Specialty Company, Inc., Chevy Chase, Md.
• Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Dornback Furnace & Foundry Co., Cleveland.
• Dowagiac Steel Furnace Co., Dowagiac, Mich.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Fitzgibbons Boiler Co., Inc., New York City.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Cleveland.
Fraser and Johnston Co., San Francisco, Calif.
• Front Rank Furnace Co., St. Louis, Mo.
Gaul Air Conditioner Co., Dayton, Ohio.
General Gas Light Co., Kalamazoo, Mich.
Gillen Co., J. L., Dowagiac, Mich.
• Glasby Manufacturing Co., Inc., J. P., Belleville, N. J.
Golden Gate Sheet Metal Works, Oakland, Calif.
Green Colonial Furnace Co., Des Moines, Ia.
Gross-Aire Mfg. Co., St. Louis, Mo.
• Hall-Neal Furnace Co., Indianapolis, Ind.
Hammel Radiator Engineering Co., Los Angeles, Cal.
Harvey-Whipple, Inc., Springfield, Mass.
Hayes Furnace & Mfg. Co., Los Angeles. (Duct)
Heating Specialties Co., Baltimore, Md. (Stainless)
Heat-Well Manufacturing Co., Emeryville, Calif.
Hell Co., The, Milwaukee, Wis.
Henderson Furnace & Mfg. Co., Sebastopol, Cal.
• Henry Furnace Company, Medina, Ohio.
• Hess Co., Chicago, Ill.
Holly Mfg. Co., Pasadena, Calif.
Huwer Heating Corp., Milford, Mich.
Independence Stove & Furnace Co., Independence, Mo.
International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco.
Iron Fireman Mfg. Co., Cleveland, Ohio.
• Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Johnson Heater Corp., Saugus, Mass.
Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
• Kaustine Company, Inc., Perry, N. Y.
Kehm Corporation, Chicago.
Keith Furnace Co., Des Moines, Ia.
Kleenair Furnace Co., Portland, Ore.
• Ko-Z-Aire, Inc., Red Oak, Iowa.
Leeson Air Conditioning Corporation, Detroit.
Lennox Furnace Co., Marshalltown, Ia.
Lundt, Inc., Ernest C., Little Falls, N. J.
McDonald Mfg. Co., A. Y., Dubuque, Ia.
• Majestic Co., Huntington, Ind.
• May-Fiebeger Co., Newark, O.
• Mayflower Air Conditioners, Inc., St. Paul, Minn.
Metromatic Mfg. Co., Everett, Mass.
• Meyer Furnace Co., Peoria, Ill.
Miller-Special Gas Heating Co., Chicago.
Monerief Furnace & Mfg. Co., Inc., Dallas, Texas.
• Morrison Steel Products, Inc., Buffalo.
• Mueller Furnace Co., L. J., Milwaukee.
• National Heater Company, St. Paul, Minn.
• Norge Heat Div., Borg-Warner Corporation, Detroit, Mich.
Norman Products Co., Inc., Columbus, Ohio.
• Norwalk Air Conditioning Corp., South Norwalk, Conn.
• Olsen Mfg. Co., C. A., Elyria, O.
Pacific Gas Heating Co., San Francisco.
• Patten Co., J. V., Sycamore, Ill.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
• Peerless Foundry Co., Indianapolis, Ind.
Peerless Sales & Supply, Lincoln, Nebr.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
• Premier Furnace Company, Dowagiac, Mich.
• Radiation Furnace Corp., Benton Harbor, Mich.
Rheem Manufacturing Company, New York City.
• Richmond Radiator Co., New York, N. Y.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
• Round Oak Co., Inc. of Ind., Dowagiac, Mich.
• Royal Heaters, Inc., Alhambra, Calif.
Ruby Management Co., Pittsburgh, Penn.
Rudy Mfg. Co., Dowagiac, Mich.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

- Rybolt Heater Co., Ashland, O.
- St. Louis Furnace Manufacturing Co., St. Louis.
- Schill Mfg. Co., Crestline, O.
- Scott-Newcomb, Inc., St. Louis.
- Security Manufacturing Co., Kansas City, Mo.
- Sequoia Manufacturing Co., San Carlos, Calif.
- State Steel Products, Inc., Los Angeles, Calif.
- Steel City Furnace Co., Springdale, Penn.
- Sure Comfort Furnace Co., Forest Park, Ill.
- Syncromatic Corporation, Watertown, Wis.
- Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
- Tjerniund Manufacturing Co., St. Paul, Minn.
- Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
- U-Wi-Matic Heating Systems, Inc., Los Angeles.
- United States Radiator Corp., Detroit.
- Utility Appliance Corp., Los Angeles, Calif.
- Viking Manufacturing Corp., Cleveland, Ohio.
- Waterman-Waterbury Co., Minneapolis.
- Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
- Will-Bert Co., Orrville, Ohio.
- Williamson Heater Co., Cincinnati.
- Wise Furnace Co., Akron, Ohio.
- York-Shipley, Inc., York, Penn.

Gas-Oil, Combination, Steel

- Automatic Firing Corp., St. Louis, Mo.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Century Engineering Corp., Cedar Rapids, Iowa.
- Henry Furnace Co., Medina, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- National Heater Co., St. Paul, Minn.
- Roberts-Gordon Appliance Corp., Buffalo, N. Y.

Liquid Petroleum Gas, Cast Iron

- Bryant Heater Div., Cleveland, Ohio.
- Coroaire Heater Corporation, Cleveland, Ohio.
- Surface Combustion Corporation, Toledo, Ohio.
- Twin City Gas Specialty Co., Minneapolis, Minn.

Liquid Petroleum Gas, Steel

- Airtemp Div., Chrysler Corp., Dayton, Ohio.
- Allan Engineering Co., Walter, Dallas, Texas.
- American Furnace & Foundry Co., Milan, Mich.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Armstrong Furnace Co., Columbus, Ohio.
- Bard Mfg. Co., Bryan, Ohio.
- Berger Furnace Mfg. Co., Pittsburgh, Penn.
- Bryant Corp., C. L., Cleveland, Ohio.
- Bryant Heater Div., Cleveland, Ohio.
- Century Engineering Corp., Cedar Rapids, Iowa.
- Chandler Co., Cedar Rapids, Iowa.
- Conco Engineering Works, Mendota, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Floral City Heater Co., Monroe, Mich.
- Frazer & Johnston Co., San Francisco, Calif.
- Front Rank Furnace Co., St. Louis, Mo.
- General Gas Light Co., Kalamazoo, Mich.
- Green Colonial Furnace Co., Des Moines, Iowa.
- Hammel Radiator Engineering Co., Los Angeles, Calif.
- Henderson Furnace & Mfg. Co., Sebastapol, Calif.
- Henry Furnace Co., Medina, Ohio.
- Holly Mfg. Co., Pasadena, Calif.
- Iron Fireman Mfg. Co., Cleveland, Ohio.
- Jackson & Church Co., Saginaw, Mich.
- Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Lennox Furnace Co., Marshalltown, Iowa.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Meyer Furnace Co., Peoria, Ill.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- National Heater Co., St. Paul, Minn.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Norman Products Co., Inc., Columbus, Ohio.
- Pacific Gas Heating Co., San Francisco, Calif.
- Palmer Manufacturing Corp., Phoenix, Ariz.
- Patten Co., J. V., Sycamore, Ill.
- Perfection Stove Co., Cleveland, Ohio.
- Radiation Furnace Corp., Benton Harbor, Mich.
- Sure Comfort Furnace Co., Forest Park, Ill.
- Syncromatic Corp., Watertown, Wis.
- United States Radiator Corp., Detroit, Mich.
- Utility Appliance Corporation, Los Angeles.
- Viking Mfg. Corp., Cleveland, Ohio.
- Waterman-Waterbury Co., Minneapolis, Minn.

Oil, Cast Iron

- American Foundry & Furnace Co., Bloomington, Ill.
- Excelsior Steel Furnace Co., Chicago, Ill.
- International Heater Co., Utica, N. Y.
- Keith Furnace Co., Des Moines, Ia.
- Kelsey Heating Co., Inc., Syracuse, N. Y.
- Livingston, Inc., Marshall, Mich.
- MaGiri Foundry & Furnace Co., Bloomington, Ill.
- Marshall Furnace Co., Marshall, Mich.
- Mueller Furnace Co., L. J., Milwaukee, Wis.
- Portland Stove Foundry Co., Portland, Me.
- Ruby Management Co., Pittsburgh, Penn.
- Schwab Furnace Co., Milwaukee.
- Westwick & Son, Inc., John, Galena, Ill.
- Wise Furnace Co., Akron, O.
- XXth Century Heating & Ventilating Co., Akron, O.

Oil, Steel

- Airwasher Corporation, Eaton Rapids, Mich.
- Airtemp Div., Chrysler Corp., Dayton, O.
- All-Gas Equipment Co., Milwaukee.
- American Furnace Co., St. Louis.
- American Furnace & Foundry Co., Milan, Mich.
- American Gas Machine Co., Albert Lea, Minn.
- American Radiator & Standard Sanitary Corp., Pittsburgh.
- American Stove Co., Lorain, O.
- Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Andrews Heating Co., Minneapolis.
- Arcweld Manufacturing Co., Seattle, Wash.
- Armstrong Furnace Co., Columbus, O.
- Associates Engineering Co., Buffalo, N. Y.
- Auburn Burner Co., Auburn, Ind.
- Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
- Auto-Heat Corp., Middletown, Conn.
- Automatic Firing Corporation, St. Louis, Mo.
- Automatic Furnace Company, Lansing, Mich.
- Avery Farm Machinery Co., Hart Burner Dept., Peoria, Ill.
- Bard Mfg. Co., Bryan, Ohio.
- Beck Engineering Combustion Kompany, St. Louis.
- Berger Furnace Manufacturing Company, Pittsburgh.
- Boyes Furnace Works, Waterloo, Ia.
- Brandes Co., Madison, Wis.
- Brenner & Co., Inc., Jacob, Fond du Lac, Wis.
- Brown Steel Tank Co., Minneapolis.
- Bryant Corp., C. L., Cleveland, Ohio.
- Bryant Heater Div., Cleveland, Ohio.
- Calesco Corporation, Lynn, Mass.
- Campbell Heating Co., Des Moines, Ia.
- Campbell Heating Co., E. K., Kansas City, Mo.
- Cary Manufacturing Co., Waupaca, Wis.
- Castle Industries Co., Inc., Yonkers, N. Y.
- Century Engineering Corporation, Cedar Rapids, Ia.
- Certified Furnace Company, St. Paul, Minn.
- Chandler Co., Cedar Rapids, Ia.
- Chicago Steel Furnace Co., Chicago.
- Chimney-Furnace Corp., Rockville, Md.
- Coleman Co., Inc., Wichita, Kans.
- Columbia Specialty Company, Inc., Chevy Chase, Md.
- Conco Engineering Corp., Mendota, Ill.
- Crane Company, Chicago.
- Daniels Mfg. Co., Inc., Sam., Hardwick, Vermont.
- Delco Appliance Div., General Motors Corp., Rochester, N. Y.
- Demuth & Sons, Charles, Mineola, L. I., N. Y.
- Deshler Foundry & Machine Works, Deshler, O.
- Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
- Domestic Mfg. Co., Seattle, Wash.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- Dualflame Div., H. & K. Appliance Co., Lima, Ohio. (With integral dom. water htg. unit)
- Dual-X Furnace Mfg. Co., Chicago, Ill.
- Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
- Electrol Burner Manufacturing Co., Inc., Rutherford, N. J.
- Evans Products Company, Plymouth, Mich.
- Excelsior Stove & Mfg. Co., Quincy, Ill.
- Farquhar Furnace Co., Wilmington, Ohio.
- Fitzgibbons Boiler Co., Inc., New York City.
- Fluid Heat Division, Anchor Post Products, Inc., Baltimore.
- Floral City Heater Co., Monroe, Mich.
- Forest City Foundries Co., Cleveland, O.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
- Furbio Company, Hermansville, Mich.
- General Electric Co., Bloomfield, N. J.
- General Oil Burner Corp., Baltimore, Md.
- Gilbert & Barker Mfg. Co., West Springfield, Mass.
- Gillen Co., J. L., Dowagiac, Mich.
- Glasby Manufacturing Co., Inc., J. F., Belleville, N. J.
- Green Colonial Furnace Co., Des Moines, Ia.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Hart & Crouse Corporation, Oneida, N. Y.
- Harvey-Whipple, Inc., Springfield, Mass.
- Heating Specialties Co., Baltimore, Md. (Stainless).
- Heatlex Furnaces, Inc., Tacoma, Wash.
- Heil Co., Milwaukee, Wis.
- Henry Furnace Co., Medina, O.
- Hess Co., Chicago, Ill.
- Home Furnace Co., Holland, Mich.
- Homer Furnace & Foundry Corp., Coldwater, Mich.
- Hotentot Co., Inc., Omaha, Nebr.
- Huwer Heating Corp., Milford, Mich.
- International Heater Co., Utica, N. Y.
- International Oil Burner Co., St. Louis, Mo.
- International Sales Co., San Francisco.
- Iron Fireman Manufacturing Co., Cleveland.
- Jackson & Church Co., Saginaw, Mich.
- Jennings, Freeland L., Lima, O. (With integral domestic water heating unit)

• Advertisement in this issue. See Index to Advertisers, page 98-D.

FURNACES, WINTER AIR CONDITIONING—(Cont'd)

Jet-Heet, Inc., Englewood, N. J.
Johnson Co., S. T., Oakland, Calif., and Philadelphia.
Johnson Heater Corp., Saugus, Mass.
Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
• Kaustine Company, Inc., Perry, N. Y.
Keith Furnace Co., Des Moines, Ia.
Kelsey Heating Co., Inc., Syracuse, N. Y.
Kleenair Furnace Co., Portland, Ore.
• Ko-Z-Aire, Inc., Red Oak, Iowa.
• Kresky Mfg. Co., Inc., Petaluma, Calif.
Laco Oil Burner Co., Inc., Griswold, Ia.
Leeson Air Conditioning Corp., Detroit.
Lennox Furnace Co., Marshalltown, Ia.
Little Burner Co., Inc., H. C. San Rafael, Calif.
Lochinvar Products Div., Dearborn, Mich.
Lundt, Inc., Ernest C., Little Falls, N. J.
Luty Furnace Mfg. Co., Detroit, Mich.
McKee Air Conditioning Company, Minneapolis.
McPherson Furnace & Supply Co., Portland, Ore.
• Majestic Co., Huntington, Ind.
• May-Fiebeger Co., Newark, O.
• Mayflower Air Conditioners, Inc., St. Paul.
Metromatic Mfg. Co., Everett, Mass.
• Meyer Furnace Co., Peoria, Ill.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Montag Stove & Furnace Works, Portland, Ore.
• Morrison Steel Products, Inc., Buffalo.
• Mueller Furnace Co., L. J., Milwaukee.
• National Heater Company, St. Paul, Minn.
• Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
• Norwalk Air Conditioning Corp., South Norwalk, Conn.
• Nu-Way Corp., Rock Island, Ill.
• Olsen Mfg. Co., C. A., Elyria, O.
Pacific Gas Heating Co., San Francisco.
• Patten Co., J. V., Sycamore, Ill.
• Peerless Foundry Co., Indianapolis, Ind.
Peerless Sales & Supply, Lincoln, Nebr.
Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
Perfection Stove Co., Cleveland, Ohio.
• Petroleum Heat & Power Co., Stamford, Conn.
• Premier Furnace Co., Dowagiac, Mich.
Premium Coal & Oil Co., Cincinnati, Ohio.
Quaker Mfg. Co., Chicago, Ill.
Quiet Automatic Burner Corp., Newark, N. J.
Quincy Stove Manufacturing Co., Quincy, Ill.
• Radiation Furnace Corp., Benton Harbor, Mich.
Rapid Heat Corporation, Detroit.
Ray Oil Burner Co., San Francisco.
Reif-Rexoil, Inc., Buffalo, N. Y.
• Richmond Radiator Co., New York, N. Y.
Rosebraugh Co., W. W., Salem, Ore.
• Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Penn.
Rudy Mfg. Co., Dowagiac, Mich.
• Rybolt Heater Co., Ashland, O.
St. Louis Furnace Manufacturing Co., St. Louis.
Sandberg Manufacturing Co., Portland, Ore.
Schill Mfg. Co., Crestline, Ohio.
• Schwab Furnace Co., Milwaukee, Wis.
Scott-Newcomb, Inc., St. Louis.
Silent Sioux Oil Burner Corp., Orange City, Ia.
Silver Flame Industries, Inc., Detroit.
Standard Heating Equipment Co., Waterloo, Ia.
• Sundstrand Engineering Co., Rockford, Ill.
Sun-Fire Stoker Corp., New Albany, Ind.
• Syncromatic Corporation, Watertown, Wis.
• Thatcher Furnace Company, Garwood, N. J.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tjernlund Manufacturing Co., St. Paul, Minn.
• Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Tru-Heet Co., Trenton, N. J.
United Air Heaters, Inc., Seattle, Wash.
United States Radiator Corp., Detroit.
• Viking Mfg. Corp., Cleveland, Ohio.
• Waterman-Waterbury Co., Minneapolis.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I.
Western Blower Co., Seattle, Wash.
Westwick & Son, Inc., John, Galena, Ill.
Will-Burt Co., Orrville, Ohio.
• Williams Oil-O-Matic Div., Eureka Williams Corp., Bloomington, Ill.
• Williamson Heater Co., Cincinnati.
York-Shipley, Inc., York, Pa.

Stoker, Cast Iron

American Foundry & Furnace Co., Bloomington, Ill.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Bovee Furnace Works, Waterloo, Ia.
Crane Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Forest City Foundries Co., Cleveland, O.
• Front Rank Furnace Co., Liberty Foundry Co., St. Louis.
Gross-Aire Mfg. Co., St. Louis, Mo.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Keith Furnace Co., Des Moines, Ia.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Marshall Furnace Co., Marshall, Mich.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee.
Stokol Stoker Company, Inc., Dayton, Ohio.
• Williamson Heater Co., Cincinnati.

Stoker, Steel

• Airtemp Div., Chrysler Corp., Dayton, Ohio.
Airwasher Corporation, Eaton Rapids, Mich.
American Furnace & Foundry Co., Milan, Mich.
• American Furnace Co., St. Louis.
• American Radiator & Standard Sanitary Corp., Pittsburgh.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Andrews Heating Co., Minneapolis.
Arcweld Manufacturing Co., Inc., Seattle, Wash.
• Armstrong Furnace Co., Columbus, O.
Auburn Burner Co., Auburn, Ind.
• Automatic Firing Corporation, St. Louis, Mo.
Bard Mfg. Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis.
Bovee Furnace Works, Waterloo, Ia.
Campbell Heating Co., Des Moines, Ia.
Campbell Heating Co., E. K., Kansas City, Mo.
• Certified Furnace Company, St. Paul, Minn.
Chicago Steel Furnace Co., Chicago.
• Conco Engineering Works, Mendota, Ill.
Crane Co., Chicago, Ill.
Daniels Mfg. Co., Inc., Bam, Hardwick, Vermont.
Deshler Foundry & Machine Works, Deshler, O.
• Dowagiac Steel Furnace Co., Dowagiac, Mich.
Electric Furnace-Man, Inc., Emmaus, Penn.
Farquhar Furnace Co., Wilmington, Ohio.
Forest City Foundries Co., Cleveland, O.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
• Furbio Company, Hermansville, Mich.
Gross-Aire Mfg. Co., St. Louis, Mo.
• Hall-Neal Furnace Co., Indianapolis, Ind.
Heatlox Furnaces, Inc., Tacoma, Wash.
• Hess Co., Chicago, Ill.
Iron Fireman Manufacturing Co., Cleveland.
• Jackson & Church Co., Saginaw, Mich.
Keith Furnace Co., Des Moines, Ia.
Lennox Furnace Co., Marshalltown, Ia.
McPherson Furnace & Supply Co., Portland, Ore.
• Majestic Company, Huntington, Ind.
• May-Fiebeger Co., Newark, O.
• Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
• Mueller Furnace Co., L. J., Milwaukee.
• National Heater Company, St. Paul, Minn.
Northwest Foundry & Furnace Co., Portland, Ore.
• Olsen Mfg. Co., C. A., Elyria, O.
Pocahontas Fuel Co., Inc., Stoker Div., Cleveland.
Rheem Manufacturing Company, New York City.
Rosebraugh Co., W. W., Salem, Ore.
• Round Oak Co., Inc. of Ind., Dowagiac, Mich.
• Rybolt Heater Co., Ashland, O.
St. Louis Furnace Manufacturing Co., St. Louis.
Sandberg Mfg. Co., Portland, Ore.
Sun-Fire Stoker Corporation, New Albany, Ind.
• Syncromatic Corporation, Watertown, Wis.
• Waterman-Waterbury Co., Minneapolis.
• Williamson Heater Co., Cincinnati.

Suspended Type

• Allan Engineering Co., Walter, Dallas, Texas.
• American Furnace Co., St. Louis, Mo. (Gas & oil)
Auburn Burner Co., Auburn, Ind. (Oil)
Automatic Gas Equipment Co., Pittsburgh, Penn.
Barwick Mfg. Corp., Wichita, Kans. (Nat., mfg., & mixed)
Bryant Heater Div., Cleveland, Ohio. (Gas)
Central States Mfg. Co., Inc., Arkansas City, Kans.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
General Gas Light Co., Kalamazoo, Mich. (Gas)
Gilbert & Barker Mfg. Co., West Springfield, Mass. (Oil)
Great National Air Conditioning Corp., Oklahoma City, Okla.
• Jackson & Church Co., Saginaw, Mich.
Little Burner Co., Inc., H. C., San Rafael, Calif.
• National Heater Co., St. Paul, Minn. (Oil & gas)
• Palmer Mfg. Corp., Phoenix, Ariz. (Gas)
Perfection Stove Co., Cleveland, Ohio. (Oil)
Prat-Daniel Corp., East Port Chester, Conn. (Gas & oil)
Resner Mfg. Co., Mercer, Penn. (Gas)
Shafco Distributing Corp., Detroit, Mich. (Oil)
Silver Flame Industries, Inc., Detroit, Mich. (Oil)
• Surface Combustion Corp., Toledo, Ohio. (Gas)
United Machine Works, Inc., Los Angeles, Calif.
• Zink Co., John, Tulsa, Okla. (Nat., L. P. & Mfg. Gas)

Utility Room, Coal, Cast Iron

• American Radiator & Standard Sanitary Corporation, Pittsburgh.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

FURNACES, WINTER AIR CONDITIONING—(Cont'd)

Utility Room, Coal, Steel

- Airtemp Div., Chrysler Corp., Dayton, O.
- American Furnace Co., St. Louis.
- American Radiator & Standard Sanitary Corp., Pittsburgh.
  Bard Mfg. Co., Bryan, Ohio.
- Hall-Neal Furnace Co., Indianapolis, Ind.
- Jackson & Church Co., Saginaw, Mich.
  Kehm Corporation, Chicago.
  Lennox Furnace Co., Marshalltown, Ia.
  Locke Stove Co., Kansas City, Mo.
  Montag Stove & Furnace Works, Portland, Ore.
- Olsen Mfg. Co., C. A. Elyria, Ohio.
- Peerless Foundry Co., Indianapolis, Ind.
  Smith Heater Co., Peter, Dearborn, Mich.

Utility Room, Gas, Cast Iron

- Airtemp Div., Chrysler Corp., Dayton, O.
  American Foundry & Furnace Co., Bloomington, Ill.
- American Radiator & Standard Sanitary Corporation, Pittsburgh.
  Firewel Co., Inc., Buffalo, N. Y.
  Forest City Foundries Co., Cleveland.
  General Electric Co., Bloomfield, N. J.
- Henry Furnace Co., Medina, Ohio.
  International Oil Burner Co., St. Louis, Mo.
- Mueller Furnace Co., L. J., Milwaukee.
- Olsen Manufacturing Co., C. A., Elyria, Ohio.
- Richmond Radiator Co., New York City.
- Rybolt Heater Co., Ashland, Ohio.
- Security Manufacturing Co., Kansas City, Mo.
- Silver Flame, Inc., Detroit.
- Surface Combustion Corp., Toledo, Ohio.
- Twin City Gas Specialty Co., Minneapolis, Minn.
  Vacuum Gas Appliances, Rome, N. Y.
- Williamson Heater Co., Cincinnati, Ohio.

Utility Room, Gas, Steel

  Advance Furnace Co., Wichita, Kans.
- Airtemp Div., Chrysler Corp., Dayton, O.
  Aladdin Heating Corp., Oakland, Calif.
- American Furnace Co., St. Louis.
  American Furnace & Foundry Co., Milan, Mich.
- American Radiator & Standard Sanitary Corp., Pittsburgh.
  Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
- Armstrong Furnace Co., Columbus, O.
  Auburn Burner Company., Auburn, Ind.
  Bard Manufacturing Co., Bryan, Ohio.
  Berger Furnace Manufacturing Company, Pittsburgh.
  Bryant Corp., C. L., Cleveland, Ohio.
  Bryant Heater Div., Cleveland, Ohio.
  Coleman Co., Inc., Wichita, Kans.
  Daisen Tool & Manufacturing Co., Detroit.
  Farquhar Furnace Co., Wilmington, Ohio.
  Floral City Heater Co., Monroe, Mich.
  Forest City Foundries Co., Cleveland.
  Fraser & Johnston Co., San Francisco.
- Front Rank Furnace Co., St. Louis.
  General Gas Light Co., Kalamazoo, Mich.
  Golden Gate Sheet Metal Works, Oakland, Calif.
  Green Colonial Furnace Co., Des Moines, Iowa.
- Hall-Neal Furnace Co., Indianapolis, Ind.
  Hammel Radiator Engineering Co., Los Angeles.
  Henderson Furnace & Mfg. Co., Sebastopol, Cal.
- Henry Furnace Company, Medina, Ohio.
  Huwer Heating Corp., Milford, Mich.
  Iron Fireman Mfg. Co., Cleveland, Ohio.
- Jackson & Church Co., Saginaw, Mich.
  Jet-Heet, Inc., Englewood, N. J.
  Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
- Kaustine Co., Inc., Perry, N. Y.
  Kehm Corporation, Chicago.
  Leeson Air Conditioning Corporation, Detroit.
  Lennox Furnace Co., Marshalltown, Ia.
  Lundt, Inc., Ernest C., Little Falls, N. J.
- Majestic Co., Huntington, Ind.
- May-Fiebeger Company, Newark, O.
- Mayflower Air Conditioners, Inc., St. Paul, Minn.
- Meyer Furnace Co., Peoria, Ill.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- Mueller Furnace Co., L. J., Milwaukee.
- Norge Heat Div., Borg-Warner Corporation, Detroit.
  Norman Products Co., Inc., Columbus, Ohio.
- Olsen Manufacturing Co., C. A., Elyria, O.
  Pacific Gas Heating Co., San Francisco.
- Palmer Manufacturing Corp., Phoenix, Ariz.
- Patten Co., J. V., Sycamore, Ill.
  Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
- Peerless Foundry Co., Indianapolis, Ind.
  Pennsylvania Furnace & Iron Co., Warren, Pa.
  Perfection Stove Co., Cleveland, Ohio.
- Radiation Furnace Corp., Benton Harbor, Mich.
  Rheem Manufacturing Company, New York City.
  Ruby Management Co., Pittsburgh, Penn.
  St. Louis Furnace Mfg. Co., St. Louis, Mo.
- Security Manufacturing Co., Kansas City, Mo.
- Sequoia Manufacturing Co., San Carlos, Calif.
- Silver Flame Industries, Inc., Detroit.
  Stokol Stoker Company, Inc., Dayton, Ohio.
  Sure Comfort Furnace Co., Forest Park, Ill.
- Syncromatic Corporation, Watertown, Wis.
  Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
  United States Radiator Corp., Detroit, Mich.
- Viking Manufacturing Corp., Cleveland, Ohio.
  Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
  Will-Burt Co., Orrville, Ohio.
- Williamson Heater Co., Cincinnati, Ohio.
  York-Shipley, Inc., York, Penn.

Utility Room, Gas-Oil Combination, Steel

- Century Engineering Corp., Cedar Rapids, Iowa.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
- Henry Furnace Co., Medina, Ohio.
- Jackson & Church Co., Saginaw, Mich.
  Norman Products Co., Inc., Columbus, Ohio.

Utility Room, Liquid Petroleum Gas, Cast Iron

- Surface Combustion Corp., Toledo, Ohio.

Utility Room, Liquid Petroleum Gas, Steel

- Airtemp Div., Chrysler Corp., Dayton, O.
- Armstrong Furnace Co., Columbus, Ohio.
  Berger Furnace Mfg. Co., Pittsburgh, Penn.
- Century Engineering Corp., Cedar Rapids, Iowa.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
  Green Colonial Furnace Co., Des Moines, Iowa.
  Hammel Radiator Engineering Co., Los Angeles, Calif.
- Henry Furnace Co., Medina, Ohio.
  Iron Fireman Mfg. Co., Cleveland, Ohio.
  Lennox Furnace Co., Marshalltown, Iowa.
- Morrison Steel Products, Inc., Buffalo, N. Y.
- Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
- Palmer Mfg. Corp., Phoenix, Ariz.
- Patten Co., J. V., Sycamore, Ill.
- Radiation Furnace Corp., Benton Harbor, Mich.
- Syncromatic Corp., Watertown, Wis.

Utility Room, Oil, Cast Iron

  Westwick & Son, Inc., John, Galena, Ill.

Utility Room, Oil, Steel

- Airtemp Div., Chrysler Corp., Dayton, O.
- American Furnace Co., St. Louis.
- American Radiator & Standard Sanitary Corp., Pittsburgh.
  American Stove Co., Lorain Div., Lorain, O.
- Armstrong Furnace Co., Columbus, Ohio.
  Auburn Burner Co., Auburn, Ind.
  Automatic Furnace Company, Lansing, Mich.
  Bard Manufacturing Co., Bryan, Ohio.
  Berger Furnace Mfg. Co., Pittsburgh, Penn.
- Brandes Co., Madison, Wis.
  Bryant Corp., C. L., Cleveland, Ohio.
  Calimode, Inc., Atlanta, Ga.
  Cary Manufacturing Co., Waupaca, Wis.
  Castle Industries Co., Inc., Yonkers, N. Y.
- Century Engineering Corp., Cedar Rapids, Iowa.
  Coleman Company, Inc., Wichita, Kans.
- Conco Engineering Works, Mendota, Ill.
  Crane Co., Chicago, Ill.
  Domestic Mfg. Co., Seattle, Wash.
- Dowagiac Steel Furnace Co., Dowagiac, Mich.
- Dual-X Furnace Mfg. Co., Chicago, Ill.
  Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
  Evans Products Co., Plymouth, Mich.
  Farquhar Furnace Company, Wilmington, Ohio.
  Floral City Heater Co., Monroe, Mich.
  Fluid Heat Division, Anchor Post Products, Inc., Baltimore.
- Front Rank Furnace Co., St. Louis.
  General Electric Co., Bloomfield, N. J.
  Gilbert & Barker Mfg. Co., West Springfield, Mass.
  Gillen Co., J. L., Dowagiac, Mich.
  Green Colonial Furnace Co., Des Moines, Iowa.
- Hall-Neal Furnace Co., Indianapolis, Ind.
  Harvey-Whipple, Inc., Springfield, Mass.
- Henry Furnace Company, Medina, Ohio.
  Huwer Heating Corp., Milford, Mich.
  International Oil Burner Co., St. Louis, Mo.
  Iron Fireman Mfg. Co., Cleveland, Ohio.
- Jackson & Church Co., Saginaw, Mich.
  Jet-Heet, Inc., Englewood, N. J.
  Kalamazoo Stove & Furnace Company, Kalamazoo, Mich.
- Kaustine Co., Inc., Perry, N. Y.
  Kehm Corporation, Chicago.
- Kresky Mfg. Co., Petaluma, Calif.
  Laco Oil Burner Co., Inc., Griswold, Iowa.
  Leeson Air Conditioning Corp., Detroit.
  Lennox Furnace Co., Marshalltown, Ia.
  Little Burner Co., Inc., H. C., San Rafael, Calif.
  Lundt, Inc., Ernest C., Little Falls, N. J.

- Advertisement in this issue. See Index to Advertisers, page 88-D.

McPherson Furnace & Supply Co., Portland, Ore.
• Majestic Co., Huntington, Ind.
• May-Fiebeger Co., Newark, O.
• Mayflower Air Conditioners, Inc., St. Paul, Minn.
• Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
• Merrison Steel Products, Inc., Buffalo.
• Mueller Furnace Co., L. J., Milwaukee.
• Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Northwest Metal Products, Inc., Seattle, Wash.
• Olson Manufacturing Co., C. A., Elyria, Ohio.
• Patten Co., J. V., Sycamore, Ill.
• Peerless Foundry Co., Indianapolis, Ind.
Perfection Stove Co., Cleveland, Ohio.
• Premier Furnace Co., Dowagiac, Mich.
Quaker Mfg. Co., Chicago, Ill.
Quincy Stove Manufacturing Co., Quincy, Ill.
• Radiation Furnace Corp., Benton Harbor, Mich.
Ruby Management Co., Pittsburgh, Penn.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Silent Sioux Oil Burner Corp., Orange City, Ia.
Silver Flame Industries, Inc., Detroit.
Smith Heater Co., Peter, Dearborn, Mich.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sure Comfort Furnace Co., Forest Park, Ill.
• Syncromatic Corporation, Watertown, Wis.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tjernlund Manufacturing Co., St. Paul, Minn.
United States Radiator Corp., Detroit, Mich.
• Viking Manufacturing Corp., Cleveland, Ohio.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I.
Will-Burt Co., Orrville, Ohio.
• Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
York-Shipley, Inc., York, Pa.

500,000 Btu and up

Acme Equipment Co., Muskogee, Okla. (Gas)
• Airtherm Manufacturing Co., St. Louis.
Airwasher Corporation, Eaton Rapids, Mich.
American Foundry & Furnace Co., Bloomington, Ill. (Coal, oil, gas)
American Furnace & Foundry Co., Milan, Mich.
• American Furnace Co., St. Louis.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind. (Gas, oil, coal)
Andrews Heating Co., Minneapolis.
• Armstrong Furnace Company, Columbus, Ohio. (Coal)
Arcweld Mfg. Co., Inc., Seattle, Wash.
Beck Engineering Combustion Kompany, St. Louis (Coal, Oil, Gas).
Calimode, Inc., Atlanta, Ga. (Oil)
Campbell Heating Co., Des Moines, Ia.
Campbell Heating Co., H. K., Kansas City, Mo.
• Certified Furnace Co., Div. Stainless & Steel Products Co., St. Paul, Minn.
Chicago Steel Furnace Co., Chicago (Gas or Oil).
Columbus Heating & Ventilating Co., Columbus, O.
Demuth & Sons, Chas., Mineola, L. I., N. Y.
• Dravo Corporation, Pittsburgh (oil, gas, coal)
Favorite Stove Co., Piqua, Ohio. (Coal)
Floral City Heater Co., Monroe, Mich.
International Sales Co., San Francisco. (Gas).
• Jackson & Church Co., Saginaw, Mich. (Coal, Oil, Gas).
Keith Furnace Co., Des Moines, Iowa. (Oil)
Lee Engineering Co., Hoboken, N. J. (Hand & stoker-oil, gas, comb. oil-gas)
Lennox Furnace Co., Marshalltown, Iowa. (Gas & coal)
Lundt, Inc., Ernest C., Little Falls, N. J. (Gas-oil)
MacGirl Foundry and Furnace Co., Bloomington, Ill. (Gas, oil, coal).
• Majestic Co., Huntington, Ind.
McPherson Furnace & Supply Co., Portland, Ore. (Oil & Coal)
• Meyer Furnace Company, Peoria, Ill. (Coal & oil)
Moncrief Furnace Co., Atlanta, Ga.
• Mueller Furnace Company, L. J., Milwaukee (Coal, Oil, Gas)
• National Heater Co., St. Paul, Minn. (Coal, oil, gas; gas-oil comb.)
Northwest Foundry & Furnace Co., Portland, Ore. (Coal & oil)
• Norwalk Air Conditioning Corp., South Norwalk, Conn.
• Olson & Co., Arthur A., Canfield, Ohio. (Oil, gas, stoker, comb. gas-oil)
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
• Peerless Foundry Co., Indianapolis, Ind.
Pennsylvania Furnace & Iron Co., Warren, Penn. (Gas)
Prat-Daniel Corp., East Fort Chester, Conn. (Gas-oil)
Rosebraugh Co., W. W., Salem, Ore.
St. Louis Furnace Mfg. Co., St. Louis, Mo. (Coal & oil)
Sandberg Mfg. Co., Portland, Ore. (Coal & oil)
• Surface Combustion Corporation, Toledo, Ohio. (Gas)
• Syncromatic Corp., Watertown, Wis. (Oil, coal, gas)
Vacuum Gas Appliances, Rome, N. Y. (Dust Heater).
Western Blower Co., Seattle, Wash.
Weatherall Engineers, Inc., Providence, R. I.
• XXth Century Heating & Ventilating Co., Akron, O.

GAS BURNERS

See Burners, Gas

GAS BURNER CONTROLS

See Controls; Control Systems

GATES, BLAST

See Blast Gates

GAUGES, DRAFT, INDICATING, PORTABLE

• Bacharach Industrial Instrument Co., Pittsburgh.
Defender Instrument and Regulator Co., St. Louis.
Detroit Air Conditioning Service Co., Detroit, Mich.
Dwyer Mfg. Co., F. W., Chicago.
Ellison Draft Gage Co., Chicago.
Foxboro Co., Foxboro, Mass.
Hays Corp., Michigan City, Ind.
Hill & Co., E. Vernon, Chicago, Ill.
Hotstream Heater Co., Cleveland, Ohio.
Meriam Instrument Co., Cleveland, Ohio.
Moeller Instrument Co., Richmond Hill, N. Y.
• Perfex Corporation, Milwaukee.
Precision Thermometer & Instrument Co., Philadelphia.
Preferred Utilities Mfg. Corp., New York City.
Uehling Instrument Co., Paterson, N. J.

GAUGES, TANK, FUEL OIL

Anderson Oil Heating Co., Seattle, Wash.
Applied Mechanics Co., Boston, Mass.
B & K Plastic Co., Inc., Paterson, N. J.
Bearlee Products Co., Green Bay, Wis.
Boston Machine Works Co., Lynn, Mass.
Hasko Utilities Co., New York, N. Y.
Jessup Signal Gauge Co., Minneapolis, Minn.
• Krueger Sentry Gauge Co., Green Bay, Wis.
Liquidometer Corp., Long Island City, N. Y.
Mel-Gauge Co., P. O. Box 17, Station A, New Haven, Conn.
Morse-Smith-Morse, Inc., Watertown, Mass.
Oil Equipment Mfg. Co., New Haven, Conn.
Petrometer Corp., Long Island City, N. Y.
• Rochester Mfg. Co., Inc., Rochester, N. Y.
Scully Signal Co., Cambridge, Mass.
Uehling Instrument Co., Paterson, N. J.

GLASS, WIRE, FOR SKYLIGHTS

Atcheson Glass Co., T. J., Buffalo.
Bache & Co., Semon, New York City.
Libbey-Owens-Ford Glass Co., Toledo, O.
Pennsylvania Wire Glass Co., Philadelphia (corrugated wire)
Pittsburgh Plate Glass Co., Pittsburgh.
Richards, J. Merrill, Boston.
Robertson Co., H. H., Pittsburgh.

GRAVITY FURNACES

See Furnaces, Warm Air, Gravity

GREASE FILTERS

See Filters, Grease

GRILLES, HEATING AND VENTILATING

Also See Faces and Registers

• A & A Register Co., Cleveland, Ohio.
• A-J Manufacturing Co., Kansas City, Mo.
• Acme Manufacturing Co., Philadelphia, Penn.
Acme Wire & Iron Works, Detroit.
• Air Control Products, Inc., Coopersville, Mich.
• Alton Manufacturing Co., Dallas, Texas.
• American Foundry & Furnace Co., Bloomington, Ill.
American Warming & Ventilating Co., Toledo, O.
• Auer Register Co., Cleveland.
• Barber-Colman Co., Rockford, Ill.
Beckley Perforating Co., Garwood, N. J.
Berger Furnace Mfg. Co., Pittsburgh, Penn.
Best Register Co., Milwaukee, Wis.
Controlair Mfg. Co., Los Angeles, Calif.
Diamond Manufacturing Co., Wyoming, Pa.
Erdle Perforating Company, Rochester, N. Y.
Greenberg's Sons, M., San Francisco, Calif.
• Harrington & King Perforating Co., Chicago.
Harrison Sheet Steel Company, Chicago.
• Hart & Cooley Mfg. Co., Holland, Mich.

• Advertisement in this issue. See Index to Advertisers, page 93-D.

Hendrick Manufacturing Co., Carbondale, Pa.
• Independent Register Co., Cleveland, O.
Johnston & Chapman Co., Chicago.
• Lima Register Co., Lima, Ohio.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Midco Register Corporation, St. Paul.
Mundt & Sons, Charles, Jersey City, N. J.
Register & Grille Manufacturing Co., Inc., Brooklyn.
• Rock Island Register Co., Rock Island, Ill.
Smith Co., J. B., Philadelphia.
Stewart Manufacturing Co., Bloomfield, N. J.
Titus Manufacturing Corporation, Waterloo, Iowa.
• Tuttle & Bailey, Inc., New Britain, Conn.
• United States Air Conditioning Corp., Minneapolis.
• United States Register Co., Battle Creek, Mich.

GRINDERS, BUFFERS, POLISHERS AND SANDERS

See Buffers, Grinders, Polishers and Sanders

GROOVING MACHINES

See Machines, Grooving

GUARDS, SNOW

Barnard Co., Geo. A., Worcester, Mass.
• Berger Brothers Co., Philadelphia.
Cartier & Sons Co., M. N., Providence, R. I.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Cromley's, Lewisburg, Penn. (For slate & standing seam roofs)
Danser Metal Works Co., Hagerstown, Md. (All types).
Downs-Smith Brass & Copper Co., New York City.
Folsom Snow Guard Co., Millis, Mass.
• Hussey & Co., C. G., Pittsburgh. (Copper)
• Levow, David, New York City.
Maysteel Products, Inc., Milwaukee.
• Obdyke, Inc., B. P., Philadelphia, Penn.
Royal-Apex Mfg. Corp., Brooklyn, N. Y.

GUNS

Rivet

Cherry Rivet Co., Los Angeles. (Blind rivet)
Chicago Pneumatic Tool Company, New York City.

Soot

• Clean Sweep Co., Lansing, Mich.
S. O. S. Products Co., Inc., Brooklyn, N. Y.

Spray, Metal

Schori Process, Div. Ferro-Co Corp., Long Island City, N. Y.
Turner Brass Works, Sycamore, Ill.
Wall Colmonoy Corporation, Detroit.

Spray, Paint

Aeroil Products Co, Inc., South Hackensack, N. J.
Binks Mfg. Co., Chicago.
Black Manufacturing Co., Baltimore.
DeVilbiss Co., Toledo, O.
Eclipse Air Brush Co., Newark, N. J.
Electric Sprayit Co., Sheboygan, Wis.
Electro Dustless Painting, Inc., Elmwood, Conn.
Plummer Spray Equipment Co., Napoleon, Ohio.
Portable Electric Tools, Inc., Chicago, Ill.
Spray Engineering Co., Somerville, Mass.

GUTTER FORMERS

See Machines, Gutter Forming

GUTTER FITTINGS AND ACCESSORIES

See Fittings and Accessories, Gutter

GUTTERS

• Ajax Furnace Fittings Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Allan Corp., Trenton, N. J.
Barnes Metal Products Co., Chicago.
Bayonne Steel Products Co., Newark, N. J.
• Berger Bros. Co., Philadelphia.
Berger Mfg. Div. of Republic Steel Corp, Canton, O.
Biersach & Niedermeyer Co., Milwaukee.
Braden Mfg. Co., Terre Haute, Ind.
Campbell Stainless Products Co., Washington, Penn. (Stainless steel)
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Edwards Mfg. Co., Inc., Cincinnati.
• Enderle, Inc., Ltd., Frank X., Los Angeles, Calif. (Galv. & copper)
Globe Iron Roofing & Corrugating Co., Newport, Ky.
Herbert & Sons, R. D., Nashville, Tenn.
• Hussey & Co., C. G., Pittsburgh, Penn. (Copper)
• Inland Steel Products Co., Milwaukee, Wis. (Galv. & copper)
Klauer Mfg. Co., Dubuque, Ia.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lamb & Ritchie Co., Cambridge, Mass.
Lyon, Conklin & Co., Inc., Baltimore.
• Miller & Doing, Brooklyn.
New Delphos Manufacturing Co., Delphos, Ohio. (Galv. steel)
Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
• Obdyke, Inc., B. P., Philadelphia, Penn.
Overly Manufacturing Co., Greensburg, Pa.
Penn Supply & Metal Corp., Philadelphia, Penn. (Galv., copper & aluminum)
Pittsburgh Plate Glass Co., Pittsburgh.
Reeves Steel & Mfg. Co., Dover, O.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riggin Metal Products, Kankakee, Ill.
Ryniker Steel Products Co., Billings, Mont.
St. Paul Corrugating Co., St. Paul, Minn. (Galv. steel)
Schecter Brothers Co., Philadelphia.
Schoedinger, F. O., Columbus, Ohio. (Galv. & stainless steel, copper)
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y. (Galv. & copper)
Sheet Metal Products Co., Peoria, Ill.
Sioux Steel Co., Sioux Falls, S. D. (Galv. & copper)
Southbridge Roofing Co., Inc., Southbridge, Mass. (Galv. & copper)
Souther Iron Co., E. E., St. Louis.
Southern States Iron Roofing Co., Savannah, Ga.
Standard Furnace & Supply Co., Omaha, Nebr. (Galv.)
• Thor Metal Products Co., Inc., Syracuse, N. Y. (Galv.)
Tiffin Art Metal Co., Tiffin, Ohio. (Aluminum, stainless steel, copper & galv.)
Van Noorden Co., E., Boston.
Wheeling Corrugating Company, Wheeling, W. Va.
• Williams-Wallace Co., San Francisco, Calif. (Galvanized & copper)
York Corrugating Co., York, Pa.

HAMMERS, POWER

Black & Decker Mfg. Co., Towson, Md. (Electric)
Borm Manufacturing Co., Elgin, Ill. (Pneumatic)
Brown-Appton Co., New York City. (Pneumatic).
Chicago Pneumatic Tool Co., New York, N. Y.
Coast Pneumatic Tool Co., Los Angeles. (Pneumatic).
Independent Pnuematic Tool Co., Aurora, Ill. (Electric, Pneumatic)
Keller Tool Company, Grand Haven, Mich. (Pneumatic).
• Merchandising & Manufacturing Associates, Inc., Lancaster, Penn. (Pneumatic)
Millers Falls Co., Greenfield, Mass. (Electric)
Phillips Drill Co., Chicago. (Electric)
Powder Power Tool Corporation, Portland, Ore. (Powder charged)
Rotor Tool Co., Cleveland, Ohio. (Pneumatic)
• Skilsaw, Inc., Chicago. (Electric & Pneumatic)
Stanley Electric Tool Div., Stanley Works, New Britain, Conn. (Electric)
Superior Manufacturing Co., Cleveland. (Pneumatic)
Syntron Company, Homer City, Pa. (Electric)
Van Dorn Electric Tool Co., Towson, Md. (Electric)
Van Products Co., Erie, Penn. (Pneumatic-foot controlled)
Whiting Corp., Harvey, Ill.
• Wodack Electric Tool Corp., Chicago. (Electric).

HARDWARE, FOR CABINETS AND CASINGS

(Handles, name plates, etc.)

American Cabinet Hardware Corp., Rockford, Ill. (Pulls, Knobs, Hinges, Catches, etc.)
American Insulator Corporation, New Freedom, Pa.
Corbin Div., P. & F., New Britain, Conn. (Handles, catches, locks, hinges)
Etched Products Co., Long Island City, N. Y. (Name Plates)
Fisher Brass Foundry, Los Angeles. (Handles)
Greenberg's Sons, M., San Francisco. (Name plates, letters, hinges, bolts, latches)
Moss Industries, Inc., Brooklyn, N. Y.
• National Lock Co., Inc., Rockford, Ill.
Premier Metal Etching Co., Long Island City. (Name Plates)
Soss Manufacturing Co., Detroit. (Invisible Hinges)

HEAT PUMPS

See Air Conditioning Units, Central Plant, Summer-Winter

HEATERS, DIRECT FIRED

See Furnaces

• Advertisement in this issue. See Index to Advertisers, page 98-D.

HEATERS, SCHOOL ROOM

Agricola Furnace Co., Inc., Gadsden, Ala.
American Foundry & Furnace Co., Bloomington, Ill.
• American Radiator and Standard Sanitary Corp., Pittsburgh.
Andrews Heating Co., Minneapolis.
Campbell Heating Co., Des Moines, Ia.
Chicago Steel Furnace Co., Chicago (Gas or Oil).
Daniels Mfg. Co., Inc., Sam, Hardwick, Vermont. (Wood)
• Drave Corporation, Pittsburgh, Penn. (Gas, oil)
Excelsior Stove & Mfg. Co., Quincy, Ill. (Coal)
Green Colonial Furnace Co., Des Moines, Iowa. (Coal)
Hart & Crouse Corporation, Oneida, N. Y.
• Henry Furnace Company, Medina, Ohio.
• Hess-Snyder Co., Massillon, Ohio.
Home Furnace Co., Holland, Mich. (Coal)
Homer Furnace & Foundry Corp., Coldwater, Mich.
Kehm Corporation, Chicago, Ill.
Keith Furnace Co., Des Moines, Ia.
Kelsey Heating Co., Syracuse, N. Y.
MaGirl Foundry and Furnace Co., Bloomington, Ill.
Marshall Furnace Co., Marshall, Mich. (Coal)
• May-Fiebeger Co., Newark, Ohio.
• Meyer Furnace Co., Peoria, Ill. (Coal)
• Mueller Furnace Co., L. J., Milwaukee, Wis.
Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Perfection Stove Co., Cleveland, Ohio. (Oil)
Pittston Stove Co., Pittston, Pa.
Portland Stove Foundry Co., Portland, Me.
• Premier Furnace Co., Dowagiac, Mich. (Oil, gas, coal)
St Clair Foundry Corp., Centralia, Ill.
Tennessee Enamel Mfg. Co., Nashville, Tenn. (Gas)
Western Blower Co., Seattle, Wash.
• Wise Furnace Co., Akron, O.
• XXth Century Heating & Ventilating Co., Akron, O.

HEATERS, SPACE, CABINET TYPE

Acme Electric Heating Co., Boston. (Electric)
Adams Bros. Mfg. Co., Inc., Pittsburgh, Penn. (Gas)
Agricola Furnace Co., Inc., Gadsden, Ala. (Coal)
Allen Manufacturing Co., Inc., Nashville, Tenn. (Oil)
American Gas Heater Corporation, Chicago. (Gas)
• American Gas Machine Company, Albert Lea, Minn. (Oil)
American Stove Co., Lorain Div., Lorain, O. (Oil)
Andrews Heating Co., Minneapolis. (Coal and Oil)
Armstrong Products Corporation, Huntington, W. Va. (Gas & Electric)
B & C Metal Stamping Co., Atlanta, Ga. (Nat., Mfg., LP)
Bern's Mfg. Co., Chicago. (Steam)
Beyer Oil Burner Co., Rosamond, Calif. (Oil)
Bryant Heater Div., Cleveland, Ohio. (All gases)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Electric)
Chattanooga Implement & Mfg. Co., Chattanooga, Tenn. (gas)
Clark Mfg. Co., H. J., Duarte, Calif. (Gas)
Cole Hot Blast Mfg. Co., Chicago. (Coal, Oil, Gas, Wood)
Coleman Company, Inc., Wichita, Kans. (Oil)
Consolidated Industries, Inc., Lafayette, Ind. (Oil)
Coroaire Heater Corporation, Cleveland, Ohio. (Gas, Oil, LP)
Dearborn Stove Co., Chicago, Ill. (Gas)
Dearborn Stove Co., Dallas, Texas (Gas).
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich. (Oil & gas)
Easyheat Incorporated, Seattle, Wash. (Oil)
Electromode Corporation, Rochester, N. Y. (Electric)
Empire Stove Co., Belleville, Ill. (Gas)
Enterprise Foundry Co., Belleville, Ill. (Coal and Wood)
Estate Heatrola Div. Noma Electric Corp., Hamilton, Ohio. (Coal, Oil)
Evans Products Co., Heating & Appliance Div., Plymouth, Mich. (Oil)
Excelsior Stove & Mfg. Co., Quincy, Ill. (Coal)
Feathertouch Products, Inc., Los Angeles. (Gas)
Florence Stove Co., Gardner, Mass. (Oil)
Folsom Company, Inc., Dallas, Tex. (All gases)
General Gas Light Co., Kalamazoo, Mich. (Gas)
H-P Products, Inc., Louisville, Ohio.
Hammel Radiator Engineering Co., Los Angeles. (Gas)
Harrison Sheet Steel Co., Chicago.
Heating Equipment Manufacturing Co., San Francisco. (Gas, Oil)
Hirsh Manufacturing Co., Garland, Texas. (Natl., Butane, Mfg.)
Hot Boy Div. Coroaire Heater Corp., Cleveland, Ohio. (L. P. & nat. gas)
Houston Blow Pipe & Sheet Metal Works, Houston, Texas. (Gas)
Independence Stove & Furnace Co., Independence, Mo. (Gas)
Inland Steel Container Co., Chicago, Ill. (Gas)
International Oil Burner Co., St. Louis, Mo. (Oil)
Jackes-Evans Mfg. Co., St. Louis.
Kehm Corporation, Chicago (Gas, Oil and Coal).
Kilbury Mfg. Co., Inc., Lawndale, Calif. (Gas)
• Kresky Mfg. Co., Inc., Petaluma, Calif. (Oil)
Kreuzo-Stamm Mfg. Co., Palisades Park, N. J. (Oil)
Laco Oil Burner Co., Inc., Griswold, Ia. (Oil)
Lasko Metal Products, Inc., West Chester, Pa. (Gas)
Leslie Mfg. Co., Dallas, Tex. (Gas)
LeWinter Appliance Co., Los Angeles. (Gas)
Little Burner Co., Inc., H. C., San Rafael, Calif. (Oil)
Lonergan Manufacturing Co., Albion, Mich. (Oil & gas)
McCulloch Motors Corp., Los Angeles. (Gas)
Martin Stamping & Stove Co., Huntsville, Ala. (Gas)
Mission Appliance Corp., Los Angeles. (Gas & LP)
Moore Div., Conlon-Moore Corporation, Joliet, Ill. (Coal, Oil, Gas)
Mulkey Co., J. F., Detroit. (Trailer)
National Gas Equipment Co., Inc., Terrell, Tex.
Northwest Heating, Inc., Portland, Ore. (Electric)
Oakland Foundry Co., Belleville, Ill.
Ohio Foundry & Mfg. Co., Steubenville, Ohio. (Gas)
Ohio Stove Company, Portsmouth, Ohio. (Gas)
• Palmer Mfg. Corp., Phoenix, Ariz. (Gas)
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Perfection Stove Co., Cleveland, Ohio. (Oil)
Pernot Corp., Norwalk, Calif. (Oil)
Phillips & Buttorff Mfg. Co., Nashville, Tenn. (Gas)
Pittston Stove Co., Pittston, Pa. (Coal or Wood)
Premier Stove Co., Belleville, Ill. (Gas)
Quad Stove Mfg. Co., Columbus, Ohio. (Gas)
Quaker Mfg. Co., Chicago, Ill. (Oil)
Quincy Stove Mfg. Co., Quincy, Ill. (Oil and Coal)
Reanor Mfg. Co., Mercer, Pa. (Gas)
Rheem Manufacturing Co., New York City (Gas, Oil).
Robinson Heaters, Inc., Columbus, Ohio. (Gas)
Samuel Stamping & Enameling Co., Chattanooga, Tenn. (Gas)
Schoedinger, F. O., Columbus, O.
Silent Sioux Oil Burner Corp., Orange City, Iowa. (Oil & gas)
South Wind Div., Stewart-Warner Corporation, Indianapolis. (Any gas)
Southern Aircraft Co., Garland, Dallas Co., Tex. (Gas)
Spark Stove Co., Inc., Oakland, Calif. (Oil)
Sunshine Mantle Co., Chanute, Kansas. (Gas)
Superior Mfg. Co., Pittsburgh, Penn. (Gas)
• Surface Combustion Corp., Toledo, Ohio. (Gas)
Tennessee Enamel Mfg. Co., Nashville, Tenn. (Gas)
Tesco, Inc., Tulsa, Okla. (Gas: nat. mfgd., LP)
Therm Oil Burner Co., Seattle, Wash. (Oil)
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif. (Electric)
Thermomatic Corporation, Willoughby, Ohio. (Gas)
United Machine Works, Inc., Hawthorne, Calif. (Gas)
U. S. Machine Corporation, Lebanon, Ind. (Oil)
United States Stove Company, South Pittsburg, Tenn.
• Utility Appliance Corporation, Los Angeles. (Gas, butane)
Vacuum Gas Appliances, Rome, N. Y. (Gas)
Victor Oil Burner Mfg. Co., Hartford, Conn.
• Viking Mfg. Corp., Cleveland, Ohio. (Oil)
Washington Stove Works, Everett, Wash. (Wood)
• Williams Radiator Company, Glendale, Calif. (Gas)

HEATERS, DOMESTIC WATER, STORAGE TYPE

Electric

Ajax Thermostatic Control Co., Gates Mills, Ohio.
Auburn Burner Co., Auburn, Ind.
• American Gas Machine Co., Albert Lea, Minn.
Bard Mfg. Co., Bryan, Ohio.
Bastian-Morley Co., Inc., La Porte, Ind.
Bock Corp., Madison, Wis.
Cady Company, Div. General Fittings Co., Providence, R. I.
• Clayton & Lambert Mfg. Co., Louisville Div., Louisville, Ky.
Cleveland Heater Co., Cleveland.
Combustion Engineering Co., Inc., Chattanooga, Tenn.
Crane Co., Chicago.
Cuprometal Manufacturing Corp., Corona, N. Y.
• Dowagiac Steel Furnace Co., Dowagiac, Mich.
Faucelfot Heater Co., La Porte, Ind. (Thermatic)
General Electric Co., Bridgeport, Conn.
Hedges Mfg. Co., Inc., M. M., Chattanooga, Tenn.
Hynes & Cox Electric Corp., Albany, N. Y.
Lawson Mfg. Co., Pittsburgh, Penn.
McGraw Electric Co., Chicago.
Michigan Tank & Furnace Corp., Dearborn, Mich.
Montag Stove & Furnace Works, Portland, Ore.
Mor Flo Heater Corp., Cleveland, Ohio.
Pacific Coast Heater Corp., San Gabriel, Calif.
Pennsylvania Range Boiler Co., Philadelphia.
Red Spot Electric Co., Tacoma, Wash.
Rheem Manufacturing Company, New York City.
Smith Corporation, A. O., Milwaukee, Wis.
Sunbeau Heater Company, Los Angeles.
Thermador Electrical Mfg. Co., Inc., Los Angeles.
Tru-Mac Mfg. Co., Reading, Mass.
United States Radiator Corporation, Detroit.
Viking Mfg. Corp., Cleveland, Ohio.
Waldorf Heater Company, Philadelphia.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Westinghouse Electric Corporation, Pittsburgh, Pa.
Wood Mfg. Co., Inc., John, Conshohocken, Pa.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Gas Fired

Ajax Thermostatic Controls Co., Gates Mills, Ohio.
Aldrich Co., Wyoming, Ill.
• American Gas Machine Co., Albert Lea, Minn.
• American Radiator & Standard Sanitary Corp., Pittsburgh.
Autogas Co., Chicago.
Bastian Manufacturing Co., W. B., Los Angeles.
Bastian-Morley Co., Inc., LaPorte, Ind.
Bock Corp., Madison, Wis.
Brown Steel Tank Co., Minneapolis.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div., Cleveland, Ohio.
Buckeye Water Heater Co., Cleveland.
• Clayton & Lambert Mfg Co., Louisville Div., Louisville, Ky.
Cleveland Heater Co., Cleveland, Ohio.
Coleman Co., Inc., Wichita, Kans. (and LP)
Combustion Engineering Co., Inc., Chattanooga, Tenn.
Continental Water Heater Co., Los Angeles, Calif.
Crane Company, Chicago.
Cronk Company, Dallas, Tex.
Crown Heater Co., Compton, Calif.
Dalco Appliance Co., San Francisco.
Dary Company, W. M., Long Beach, Calif.
Day & Night Div., Affiliated Gas Equipment, Inc. Monrovia, Calif.
• Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Diamond Agencies, Pasadena, Calif. (LP)
Domestic Gas Equipment Co., San Francisco.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
EverHot Heater Co., Detroit, Mich.
Eveready Supply Co., Dallas, Tex.
FauceHot Heater Co., LaPorte, Ind.
General Water Heater Corp., Burbank, Calif.
Graham Hambly Co., Los Angeles.
Hamler Boiler & Tank Co., Chicago.
• Handley-Brown Heater Co., Jackson, Mich.
Harrison Sheet Steel Co., Chicago.
Hedges Mfg. Co., Inc., M. M., Chattanooga, Tenn.
Hi-Qua Mfg. Co., Philadelphia.
Hollywood Water Heater Co., Los Angeles, Calif.
Horn-Sullivan Company, San Francisco.
Hotstream Heater Co., Cleveland.
Hoyt Heater Co., Los Angeles.
Hoyt Heater Co. of No. Calif., Oakland, Calif.
Hynes & Cox Electric Corp., Albany, N. Y.
Koil-Lee Heater Co., Geneva, Ill.
Lawson Manufacturing Co., Pittsburgh.
Los Angeles Gas Appliance Co., Inc., Los Angeles.
Lovekin Water Heater Co., Philadelphia.
Luxra Co., Atchison, Kan.
McDaniel Mfg. Co. Inc., Dallas, Texas.
McDonald Mfg. Co., A. Y., Dubuque, Ia.
M & K Water Heater Co., Culver City, Calif. (LP)
Merit Water Heater Co., Compton, Calif.
Michigan Tank & Furnace Corp., Dearborn, Mich.
Midwest Heater Co., Omaha, Nebr.
Miller-Special Gas Heating Co., Chicago, Ill.
Mor Flo Heater Corp., Cleveland, Ohio.
Mustee Heater Co., Cleveland.
National Appliances, Inc., Pittsburgh. (Nat., Mfg., LP)
• Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
Pacific Coast Heater Corp., San Gabriel, Calif.
Pennsylvania Range Boiler Co., Philadelphia.
Perfection Water Heater Co., Glendale, Calif.
Pioneer Water Heater Corp., Los Angeles.
Pittsburgh Water Heater Co., Pittsburgh. (L. P. Butane)
Republic Heater Corporation, Huntington Park, Calif.
Rheem Manufacturing Company, New York City.
Ruud Manufacturing Co., Pittsburgh.
Sands Mfg. Co., Cleveland.
Schoedinger, F. O., Columbus, Ohio.
• Security Manufacturing Co., Kansas City, Mo.
Sellers Engineering Co., Chicago.
Smith Corporation, A. O., Milwaukee, Wis.
Southern Heater Corporation, Compton, Calif.
Southwestern Heater Corporation, Hillsboro, Tex.
Star Heater Co., Dallas, Tex. (Nat., Mfg., LP)
Sunbeau Heater Company, Los Angeles. (LP, Nat. & Mfg.)
Sunshine Mantle Co., Chanute, Kans.
SuperbO Mfg. Co., Los Angeles.
United States Radiator Corporation, Detroit.
Viking Mfg. Corp., Cleveland, Ohio.
Waldorf Heater Company, Philadelphia.
Wood Mfg. Co., Inc., John, Conshohocken, Pa.
Wright Manufacturing Corporation, Delaware, Ohio. (Mfg., Nat.)

Oil Fired

• Airtemp Division, Chrysler Corp., Dayton, O.
Aldrich Co., Wyoming, Ill.
Allen Manufacturing Co., Inc., Nashville, Tenn.
• American Gas Machine Company, Albert Lea, Minn.
Auburn Burner Company, Auburn, Ind.
Bastian-Morley Co., Inc., LaPorte, Ind.
Bock Corporation, Madison, Wis.
Breese Corporations, Inc., Newark, N. J.
Burnham Boiler Corporation, Irvington-on-the-Hudson, N. Y.
• Century Engineering Corporation, Cedar Rapids, Iowa.
• Clayton & Lambert Mfg. Co., Louisville, Ky.
Coleman Company, Inc., Wichita, Kans.
• Cosco Engineering Works, Mendota, Ill.
Crane Co., Chicago, Ill.
Crown Heater Co., Compton, Calif.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
• Delco Appliance Div., General Motors Corp., Rochester, N. Y.
DeSoto Oil Burner Corp., York, Penn.
• Dowagiac Steel Furnace Co., Dowagiac, Mich.
Dualflame Div. H. & K. Appliance Co., Lima, Ohio.
Duo-Therm Div., Motor Wheel Corporation, Lansing, Mich.
• Electrol Burner Manufacturing Co., Inc., Rutherford, N. J.
Evans Products Co., Plymouth, Mich.
Florence Stove Co., Gardner, Mass.
• General Oil Burner Corp., Baltimore, Md.
Gerstein & Cooper Co., South Boston, Mass.
Gilcor Products Corporation, Dowagiac, Mich.
Gillen Company, J. L., Dowagiac, Mich.
Hanson-Gates Mfg. Co., Inc., Reading, Mass.
Hotstream Heater Co., Cleveland.
Hynes & Cox Electric Corp., Albany, N. Y.
Jackson G. Gilmore & Co., Columbus, Ohio.
Johnson Co., S. T., Oakland, Cal.
• Kresky Mfg. Co., Inc., Petaluma, Calif.
Kreuno-Stamm Co., New York City.
Little Burner Co., Inc., H. C., San Rafael, Cal.
Lochinvar Products Div., Dearborn, Mich.
Merit Water Heater Co., Compton, Calif.
Michigan Tank & Furnace Corporation, Dearborn, Mich.
• Norge Heat Div., Borg-Warner Corp., Detroit, Mich.
• Nu-Way Corp., Rock Island, Ill.
Perfection Stove Co., Inc., Cleveland, Ohio.
• Petroleum Heat & Power Co., Stamford, Conn.
Preferred Utilities Mfg. Corp., New York City.
Quaker Manufacturing Co., Chicago, Ill.
Quincy Stove Mfg. Co., Quincy, Ill.
Ray Oil Burner Company, San Francisco.
Rheem Manufacturing Company, New York City.
Sall Brothers, Rockford, Ill.
Scott-Newcomb, Inc., St. Louis.
Sunbeau Heater Company, Los Angeles.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Toledo Heater Company, Toledo, Ohio.
• Toridheet Div., Cleveland Steel Porducts Corp., Cleveland, Ohio.
Viking Mfg. Corp., Cleveland.
York Electric & Machine Co., York, Pa.
York-Shipley, Inc., York, Penn.

Stoker Fired

Catskill Metal Works, Inc., Catskill, N. Y.
Gehl Bros. Mfg. Co., West Bend, Wis.
Sall Bros., Rockford, Ill.

HEATING COILS

See Coils, Heating

HOISTS, HAND AND POWER

American Engineering Co., Philadelphia.
American MonoRail Co., Cleveland (Electric)
Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Campbell Equipment Co., Chicago, Ill.
Chicago Pneumatic Tool Co., New York City. (Power)
Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Cleveland Tramrail Div., Cleveland Crane & Eng. Co., Wickliffe, Ohio. (Hand & electric)
Detroit Hoist & Machine Co., Detroit.
Electro Lift, Inc., New York City.
Euclid Crane & Hoist Co., Euclid, Ohio.
• Field Control Div., H. D. Conkey & Co., Mendota, Ill.
Ford Chain Block Div., American Chain & Cable Co., Inc., York, Penn. (Electric)
Harnischfeger Corporation, Milwaukee, Wis.
Harrington Co., Philadelphia.
Industrial Brownhoist Corporation, Bay City, Mich.
Lexington Supply Co., Cleveland, Ohio.
Lisbon Hoist & Crane Co., Lisbon, Ohio. (Electric)
Louden Machinery Company, Fairfield, Iowa.
McCollum Hoist & Mfg. Co., Downers Grove, Ill.
National Screw & Mfg. Co., Chester Hoist Div., Lisbon, Ohio.
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia.
Reading Chain & Block Corporation, Reading, Penn. (Hand-chain; power-electric)
Robbins & Myers, Inc., Springfield, Ohio.
Shepard Niles Crane & Hoist Corporation, Montour Falls, N. Y.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Union Mfg. Co., New Britain, Conn.
Whiting Corp., Harvey, Ill.
Wright Hoist Division, American Chain & Cable Co., York, Penn.
Yale & Towne Mfg. Co., Philadelphia.

• Advertisement in this issue. See Index to Advertisers, page 95-D.

HOODS, DRAFT, GAS

See Draft Diverters, Gas Hoods

HOSE AND FITTINGS, METAL FLEXIBLE

Aeroquip Corp., Jackson, Mich.
American Metal Hose Branch, American Brass Co., Waterbury, Conn.
American Ventilating Hose Co., New York, N. Y. (Nonmetallic)
Chicago Metal Hose Corporation, Maywood, Ill.
Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
Everhot Products Co., Chicago, Ill.
Packless Metal Products Corp., New Rochelle, N. Y.
Pennsylvania Flexible Metallic Tubing Co., Philadelphia.
Seamlex Co., Long Island City, N. Y.
Titeflex, Inc., Newark, N. J.
United Metal Hose Co., Inc., Long Island City, N. Y.
Uniflex Metal Hose Corp., Naugatuck, Conn.
Wiremold Co., Hartford, Conn.

HOUSINGS, BLOWER AND FAN

• Air Controls, Inc., Cleveland.
• Brundage Co., Kalamazoo, Mich.
Chicago Blower Corp., Chicago, Ill. (Propeller)
Circulators & Devices Mfg. Corp., New York.
• Clarage Fan Co., Kalamazoo, Mich. (Blower)
Commercial Shearing & Stamping Co., Youngstown, Ohio.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Detroit Stamping Co., Detroit, Mich. (Blower)
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
• Lau Blower Co., Dayton, O.
Martin Fan & Blower Co., Chicago, Ill.
Northern Blower Co., Cleveland, Ohio. (Blower)
Sandberg Mfg. Co., Portland, Ore.
• Trade-Wind Motorfans, Inc., Los Angeles, Calif.
• U. S. Air Conditioning Corp., Minneapolis.
Utica Products, Incorporated, Utica, N. Y.
• Viking Air Conditioning Corp., Cleveland.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.

HUMIDIFIER FITTINGS

See Fittings, Humidifier, Water Line

HUMIDIFIER VALVES

See Valves, Humidifier, Water Level

HUMIDIFIERS, FURNACE, AUTOMATIC

Evaporative

Agricola Furnace Co., Inc., Gadsden, Ala.
Air Cooling Engineering Co., Morton Grove, Ill.
• American Radiator & Standard Sanitary Corporation, Pittsburgh.
• Automatic Humidifier Co., Cedar Falls, Ia.
• Bard Manufacturing Company, Bryan, Ohio.
• Cleveland Humidifier Co., Cleveland.
Fresh'nd-Aire Co., Chicago, Ill.
Green Colonial Furnace Co., Des Moines, Ia.
Lennox Furnace Co., Marshalltown, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
• Little Giant Vaporizer Co., Oklahoma City, Okla.
McDonnell & Miller, Inc., Chicago.
• Maid-O'-Mist, Inc., Chicago.
• Meyer Furnace Co., Peoria, Ill.
• Mueller Furnace Co., L. J., Milwaukee, Wis.
• Olsen Manufacturing Co., C. A., Elyria, Ohio.
• Palmer Mfg. Corp., Phoenix, Ariz.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Pfening Co., Fred D., Columbus, Ohio.
• Premier Furnace Co., Dowagiac, Mich.
Scoville Mfg. Co., Waterville, Conn.
Skilbeck Mfg. Co., Kenosha, Wis.
• Skuttle Manufacturing Co., Detroit.
Somers, Inc., H. J., Detroit, Mich.
Steel Products Engineering Co., Springfield, Ohio.
• Viking Air Conditioning Corp., Cleveland.
Western Blower Co., Seattle, Wash.

Spray

• Air Controls, Inc., Cleveland.
Air Cooling Engineering Co., Morton Grove, Ill.
• American Foundry & Furnace Co., Bloomington, Ill.
• American Radiator and Standard Sanitary Corp., Pittsburgh.
Electric Sprayit Company, Sheboygan, Wis.
Handelan Washed Air Co., Minneapolis.
• Little Giant Vaporizer Co., Oklahoma City, Okla.
• Meyer Furnace Co., Peoria, Ill.
Somers, Inc., H. J., Detroit, Mich.
Spray Engineering Co., Somerville, Mass.
Spraying Systems Company, Chicago.
Supreme Electric Products Corp., Rochester, N. Y.
Water Cooling Corp., New York, N. Y.

HUMIDISTATS

See Controls

HUMIDITY RECORDERS

See Recorders, Humidity

HYGROMETERS

American Instrument Company, Silver Spring, Md.
Brown Instrument Co., Div. of Minneapolis-Honeywell Regulator Co., Philadelphia.
Fee and Stemwedel, Inc., Chicago.
Foxboro Co., Foxboro, Mass.
Fries Instrument Div., Baltimore, Md.
G. M. Manufacturing Co., New York City.
General Scientific Equipment Co., Philadelphia.
H-B Instrument Co., Philadelphia, Penn.
Johnson Service Co., Milwaukee, Wis.
Moeller Instrument Co., Richmond Hill, N. Y.
Palmer Thermometers, Inc., Cincinnati.
Philadelphia Thermometer Co., Philadelphia, Penn.
Precision Thermometer and Instrument Co., Philadelphia.
Tagliabue Corp. (N. J.), C. J., Newark, N. J.
Taylor Instrument Companies, Rochester, N. Y.
Wekeler Thermometer Corp., New York City.
Weston Electrical Instrument Corp., Newark, N. J.

INCINERATORS

Autogas Co., Chicago, Ill.
Bowser, Inc., Cairo, Ill.
Calcinator Div., Valley Welding & Boiler Co., Bay City, Mich.
• Majestic Co., Huntington, Ind.

INDICATING THERMOMETERS

See Thermometers, Indicating

INSULATING CEMENT

See Cement, Insulating

INSULATION

Building

Acme Asbestos Covering & Flooring Co., Chicago. (Rockwool)
Alfol Division, Reflectal Corp., New York City. (Blanket)
Alton Mineral Wool Insulation Co., St. Louis. (Loose, Granulated, Batts)
American Flange & Manufacturing Co., Inc., New York City. (Reflective)
American Hair & Felt Co., Chicago. (Hair)
Armstrong Cork Co., Lancaster, Pa. (Cork)
Bache & Co., Semon, New York City. (Glass)
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Barnhardt Manufacturing Co., Charlotte, N. C.
Barrett Division, Allied Chemical & Dye Corporation, New York City. (Tar Felt and Rockwool)
Berger Furnace Mfg. Co., Pittsburgh (Rockwool, granulated, loose, batts)
Cabot, Inc., Samuel, Boston.
Carey Co., Philip, Cincinnati, Ohio. (Mineral wool)
Celotex Corp., Chicago.
Certain-teed Products Corporation, Ardmore, Penn. (Fiberglas batts & blankets)
Chamberlin Company of America, Detroit (Rockwool)
Coast Insulating Corp., Los Angeles. (Rockwool, Batts, Fill)
Cork Import Corp., Englewood, N. J. (Corkboard, Mineral Wool Board)
Cork Insulation Co., New York City. (Cork)
Dry-Zero Corporation, Chicago. (Blanket and Bound Batt)
Eagle-Picher Co., Cincinnati, O. (Mineral Wool)
Flintkote Co., New York, N. Y. (Fibre board & insulating wool)
Ford Roofing Products Co., Chicago. (Board and rockwool)
Infra Insulation, Inc., New York, N. Y. (Accordion aluminum)
Insulite Div. Minnesota and Ontario Paper Co., Minneapolis. (Wood fibre)
International Vermiculite Co., Girard, Ill. (Loose fill)
Johns-Manville, New York City.
Johnson Foil Mfg. Co., St. Louis, Mo. (Paper backed foil)
Keasbey Co., Robert A., New York, N. Y. (Asbestos)

• Advertisement in this issue. See Index to Advertisers, page 95-D.

Kimberly-Clark Corp., Neenah, Wis.
Lehon Co., Chicago, Ill. (Paper)
Masonite Corp., Chicago. (Blankets)
Mundet Cork Corp., North Bergen, N. J. (Cork)
Munn and Steel, Inc., Newark, N. J. (Vermiculite)
National Gypsum Co., Buffalo, N. Y. (Rock Wool and Board)
• Owens-Corning Fiberglas Corporation, Toledo. (Board and Blanket)
Pacific Lumber Co., San Francisco. (Loose fill)
Pittsburgh Corning Corp., Pittsburgh, Penn.
Pittsburgh Plate Glass Co., Pittsburgh. (Cellular Glass)
Plant Rubber & Asbestos Works, Inc., San Francisco.
Plastergon Wall Board Co., Buffalo, N. Y. (Board)
Reynolds Metals Co., Louisville, Ky.
Riverton Lime & Stone Co., Inc., Riverton, Va. (Mineral Wool)
Robinson Insulation Co., Great Falls, Mont. (Vermiculite)
Silvercote Products, Inc., Chicago, Ill. (Reflective type)
Sisalkraft Co., Chicago. (Reflective)
Sprayo-Flake Co., Chicago.
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
Standard Rolling Mills, Incorporated, Brooklyn. (Reflective)
Tennessee Products & Chemical Corporation, Nashville, Tenn. (Mineral Wool)
Therminsul Corp. of America, Kalamazoo, Mich. (Batts, bulk, granulated)
Truscon Steel Co., Youngstown, Ohio. (Fiberglas)
United Cork Companies, Kearney, N. J.
United States Gypsum Co., Chicago, Ill. (Mineral wool)
United States Mineral Wool Co., So. Milwaukee, Wis. (Mineral Wool)
U. S. Rock Wool Co., Salt Lake City. (Granulated, Batt and Blanket)
Universal Gypsum & Lime Co., Chicago. (Loose fill)
Western Mineral Products Co., Minneapolis, Minn. (Fill)
Western Rock Wool Corp., Huntington, Ind. (Fill)
• Wilson & Co., Inc., Chicago, Ill. (Hair, Felt)
• Wilson, Inc., Grant, Chicago, Ill. (Rock Wool)
Wood Conversion Co., St. Paul, Minn. (Board and blanket)
Zonolite Co., Chicago, Ill.

Duct

Acme Asbestos Covering & Flooring Co., Chicago.
Alfol Division, Reflectal Corp., New York City. (Aluminum Foil)
American Hair & Felt Co., Chicago, Ill. (Hair Felt)
Armstrong Cork Co., Lancaster, Pa.
Baldwin-Hill Company, Trenton, N. J. (Mineral wool)
Cabot, Inc., Samuel, Boston.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Celotex Corp., Chicago.
Cork Import Corp., Englewood, N. J.
Cork Insulation Co., Inc., New York City. (Cork)
Dry-Zero Corporation, Chicago.
Eagle-Picher Co., Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Felters Co., Inc., Boston, Mass.
Hinde & Dauch Paper Co., Sandusky, Ohio. (Air Cell)
Insulite Div. Minnesota and Ontario Paper Co., Minneapolis.
International Vermiculite Co., Girard, Ill. (Block)
Johns-Manville, New York.
Keasbey & Mattison Co., Ambler, Penn. (Asbestos)
Keasby Co., Robert A., New York, N. Y. (Aircell cork & asbestos)
Keystone Asphalt Products Co., Chicago.
LaClede-Christy Clay Products Co., St. Louis, Mo.
Masonite Corporation, Chicago.
Mortell Co., J. W., Kankakee, Ill. (Cork coating)
Mundet Cork Corp., North Bergen, N. J. (Cork)
Munn and Steele, Inc., Newark, N. J. (Plastic)
National Gypsum Co., Buffalo. (Rock Wool)
Norristown Magnesia & Asbestos Co., Norristown, Pa. (Thermal)
• Owens-Corning Fiberglas Corp., Toledo. (Board and Blanket)
Pittsburgh Corning Corporation, Pittsburgh. (Block)
Pittsburgh Plate Glass Co., Pittsburgh, Pa. (Cellular Glass)
Plant Rubber & Asbestos Works, Inc., San Francisco.
Quigley Co., Inc., New York City.
Refractory & Insulation Corp., New York City. (Inside Duct Lining)
Reynolds Metals Co., Louisville, Ky. (Aluminum foil)
Robinson Insulation Co., Great Falls, Mont.
Ruberoid Co., New York, N. Y. (Asbestos)
• Sall Mountain Co., Chicago.
Sprayo-Flake Co., Chicago.
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
Therminsul Corp., Kalamazoo, Mich. (Block rock wool)
United Cork Companies, Kearney, N. J.
United States Mineral Wool Co., So. Milwaukee, Wis. (Mineral Wool)
United States Rubber Co., New York, N. Y. (Sound deadening)
Western Felt Works, Chicago. (Felt)
• Wilson & Co., Inc., Chicago, Ill. (Hair & felt)
• Wilson, Inc., Grant, Chicago.
Wood Conversion Co., St. Paul, Minn.
Zonolite Co., Chicago, Ill. (Insulating plastic)

Furnace

Acme Asbestos Covering & Flooring Co., Chicago. (Asbestos, Rockwool)
Alfol Division, Reflectal Corporation, New York, N. Y. (Aluminum foil & asbestos combination)
Armstrong Cork Co., Lancaster, Penn. (Mineral wool board)
Babcock & Wilcox Co., New York, N. Y. (Firebrick, cement mixes)
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos & magnesia)
Chicago Fire Brick Co., Chicago, Ill. (Mineral wool & plastic cement)
Coast Insulating Corp., Los Angeles, Calif. (Rock wool, cement)
Eagle-Picher Co., Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Green Fire Brick Co., A. P., Mexico, Mo. (Mineral wool)
International Vermiculite Co., Girard, Ill. (Block Cement)
Johns-Manville, New York, N. Y.
Keasbey & Mattison Co., Ambler, Penn. (Asbestos)
Keasby Co., Robert A., New York, N. Y. (Asbestos cement, magnesium blocks)
LaClede-Christy Clay Products Co., St. Louis. (Cement and Blocks)
Munn and Steele, Inc., Newark, N. J. (Bonding, Castable)
Norristown, Magnesia & Asbestos Co., Norristown, Pa.
• Owens-Corning Fiberglas Corp., Toledo, O. (Blanket)
Plant Rubber & Asbestos Works, Inc., San Francisco. (Asbestos)
Plibrico Jointless Firebrick Co., Chicago. (Mineral Wool)
Quigley Company, Inc., New York City.
Refractory & Insulation Corp., New York City. (Block, Blanket)
Robinson Insulation Co., Great Falls, Mont. (High Temperature Cement)
Ruberoid Co., New York, N. Y. (Asbestos)
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
Therminsul Corp., Kalamazoo, Mich. (Block rock wool)
United States Mineral Wool Co., So. Milwaukee, Wis. (Mineral wool)
Western Mineral Products Company, Minneapolis, Minn. (Vermiculite)
• Wilson, Inc., Grant, Chicago. (Asbestos)
Zonolite Co., Chicago, Ill.

KITCHEN FANS

See Fans, Kitchen

LAMPS, GERMICIDAL

Domestic Devices, Cleveland.
General Electric Co., Cleveland.
• Merchandising & Manufacturing Associates, Inc., Lancaster, Penn.
Sperti, Inc., Norwood, Ohio.
Westinghouse Electric Corporation, Bloomfield, N. J.

LIFTS, SKYLIGHT

• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Biersach & Niedermeyer Company, Milwaukee.
Danser Metal Works Co., Hagerstown, Md.
• Levow, David, New York City. (Gearing)
Park City Cornice Works, Inc., Bridgeport, Conn.
Perkinson & Brown, Chicago, Ill.
Van Noorden Co., E., Boston.
Weiss & Co., H., New York, N. Y.

LIMIT CONTROLS

See Controls

LININGS, CHIMNEY

• Condensation Engineering Co., Chicago, Ill. (Vitreous enamel)
• Van-Packer Corporation, Chicago.
• Williams-Wallace Co., San Francisco, Calif.

LINKS, FUSIBLE

Grinnell Co., Inc., Providence, R. I.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Steffens-Amberg Co., Newark, N. J.
Westinghouse Electric Corp., Pittsburgh, Penn.

LOUVERS AND SHUTTERS, AUTOMATICALLY OR MANUALLY CONTROLLED

• Air Controls, Inc., Cleveland.
• Air Conditioning Products Co., Detroit.
Airmaster Corp., Chicago.
Air & Refrigeration Corp., New York, N. Y.
Allen Ventilator Div., Rochester, Mich.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

American Coolair Corp., Jacksonville, Fla.
American Foundry & Furnace Co., Bloomington, Ill.
American Warming & Ventilating Co., Toledo, Ohio.
Arex Co., Chicago.
Arlington Electric Co., St. Louis.
Babbin, Inc., New York City.
• Barber-Colman Co., Rockford, Ill.
Belter Electric Mfg. Co., G. J., St. Louis.
Bierach & Niedermeyer Co., Milwaukee.
• Bishop & Babcock Mfg. Co., Cleveland.
• Buffalo Forge Co., Buffalo.
Burt Mfg. Co., Akron, Ohio.
Campbell Heating Co., E. K., Kansas City, Mo.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Circulators & Devices Mfg. Corp., New York City.
Clay Equipment Corp., Cedar Falls, Ia.
Commercialaire, Inc., Brooklyn.
Controlair Manufacturing Co., Los Angeles.
Dana Fan & Blower Corporation, Cincinnati.
DeBothezat Fans Division, East Moline, Ill.
Decatur Iron & Steel Co., Decatur, Ala.
Dual-Air Fan Corp., South Elgin, Ill.
Eagle-Picher Company, Cincinnati, Ohio.
Electrovent Fan & Mfg. Co., Chicago.
• Elgo Shutter & Mfg. Co., Detroit.
Hunter Fan & Ventilating Co., Memphis, Tenn.
International Engineering, Inc., Dayton, Ohio.
Johnson Fan & Blower Corp., Chicago.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
• Kirk & Blum Mfg. Co., Cincinnati.
Lakewood Engineering & Mfg. Co., Chicago
Martin Fan & Blower Co., Chicago.
Maysteel Products, Inc., Milwaukee.
Meier Electric & Machine Co., Indianapolis.
Meyer Mfg. Co., Detroit.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
Myers Electric Co., Inc., Pittsburgh, Penn.
Nelson Corporation, Herman, Moline, Ill.
Overly Manufacturing Co., Greensburg, Pa.
Peerless Electric Co., Warren, Ohio.
Perkinson & Brown, Chicago, Ill.
Reed Unit-Fans, Inc., New Orleans.
Riggin Metal Products, Kankakee, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Robertson Co., H. H., Pittsburgh.
Schoedinger, F. O., Columbus, Ohio.
Schwitzer-Cummins Company, Indianapolis.
Signal Electric Mfg. Co., Menominee, Mich.
Simpson Screen Co., Oakland, Calif.
• Standard Stamping & Perforating Co., Chicago.
• Swartwout Company, Cleveland.
Titus Manufacturing Corporation, Waterloo, Ia.
• Trade-Wind Motorfans, Inc., Los Angeles, Calif.
• Tuttle & Bailey, Inc., New Britain, Conn.
• United States Register Co., Battle Creek, Mich.
• Utility Appliance Corporation, Los Angeles.
Van Noorden Co., E., Boston.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
White Co., Kelvin & Wilfrid O., Boston, Mass.
Wing Mfg. Co., L. J., New York City.
Young Regulator Co., Cleveland.

LOUVERS, STATIONARY

• Air Control Products, Inc., Cooperaville, Mich.
American Warming & Ventilating Co., Toledo, Ohio.
Appleton Supply Co., Inc., Appleton, Wis. (End Wall)
Berger Furnace Mfg. Co., Pittsburgh, Penn.
Commercialaire, Inc., Brooklyn, N. Y.
• Elgo Shutter & Mfg. Co., Detroit, Mich.
Firecraft Corporation, Chicago.
Hemphill Co., A. D., Lake City, Minn.
• Inland Steel Products Co., Milwaukee.
Leslie Welding Co., Chicago, Ill.
Meyer Mfg. Co., Detroit, Mich.
Molloy Sales Corp., Chicago, Ill.
Muckle Mfg. Co., Owatonna, Minn.
Perkinson & Brown, Chicago, Ill.
Schwitzer-Cummins Company, Indianapolis, Ind.
Simpson Screen Co., Oakland, Calif.
• Swartwout Co., Cleveland, Ohio.
Titus Mfg. Corp., Waterloo, Iowa.

MACHINERY, SHEET METAL, REBUILT AND USED

(Capacity 10 ga or lighter)

• Acme Equipment Co., Inc., Chicago.
Biggs Supply Co., B. C., Lincoln, Nebr.
Brooks Co., Inc., B. D., Boston, Mass.
Burns Machinery Co., F. W., Milwaukee.
• Central-West Machinery Co., Chicago.
• Federal Machinery Company, New York City. (Sheet Metal)
Harris Machinery Co., Minneapolis, Minn.
Hyman & Sons, Joseph, Philadelphia.
Interstate Machinery Co., Inc., Chicago, Ill.
Machine Rebuilding Co., Detroit, Mich.
Machinery Liquidating Co., Detroit, Mich.
• Maplewood Machinery Co., Inc., Chicago.
• Milton Equipment Co., Philadelphia.
• Potts-Farrington Co., Philadelphia.
• Reiner & Campbell Co., Inc., Elizabeth, N. J.
St. Louis Tool Co., St. Louis.

MACHINES, SHEET METAL WORKING

(Capacity 10 ga or lighter)

Bar Folding, Hand

• Barth Mfg. Co., Millidale, Conn.
Frederick Iron & Steel, Inc., Frederick, Md.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.
St. Louis Tool Co., St. Louis.

Beading, Hand

• Barth Mfg. Co., Millidale, Conn.
• Niagara Machine & Tool Works, Buffalo.
Packham Crimper Co., Mechanicsburg, Ohio.
• Peck, Stow & Wilcox Co., Southington, Conn.
Robertson, F. L., Buffalo.

Beading, Power

Callahan Can Machine Co., Inc., Brooklyn.
Kling Bros. Engineering Works, Chicago, Ill.
• Maplewood Machinery Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.
Swain Mfg. Co., Fred J., St. Louis.

Benders (Angle, Etc.)

Bath Company, Cyril, Cleveland (Contour formers).
Champion Blower & Forge Co., Lancaster, Pa.
Excelsior Tool & Machine Co., East St. Louis, Ill. (Circular bending).
Hendley & Whittemore Co., Beloit, Wis.
• Hossfeld Mfg. Co., Winona, Minn.
• Kane & Roach, Inc., Syracuse, N. Y.
Kling Bros. Engineering Works, Chicago.
• Knights Co., James, Sandwich, Ill.
Martens & Stormoen, Boston.
• O'Neil-Irwin Mfg. Co., Lake City, Minn.
Pedrick Tool & Machine Co., Philadelphia.
Thomas Machine Manufacturing Co., Pittsburgh.
• Whitney Metal Tool Co., Rockford, Ill.

Brakes, Hand

• Acme Equipment Co., Inc., Chicago, Ill.
• Barth Mfg. Co., Millidale, Conn.
Berkroy Products, Inc., Burbank, Calif.
• Dreis & Krump Mfg. Co., Chicago.
Excelsior Tool and Machine Co., East St. Louis, Ill.
• G. & S. Machine Shop, Detroit, Mich.
New Albany Machine Mfg. Co., New Albany, Ind.
• Niagara Machine & Tool Works, Buffalo.
• O'Neil-Irwin Mfg. Co., Lake City, Minn.
• Peck, Stow & Wilcox Co., Southington, Conn.
Ward Machine & Tool Co., Pittsburgh, Penn.
• Ward Machinery Co., Chicago, Ill.
Weiss & Co., H., New York City.
• Whitney Metal Tool Co., Rockford, Ill.
• Wysong and Miles Co., Greensboro, N. C.

Brakes, Portable

Berkroy Products, Inc., Burbank, Calif.
• Dreis & Krump Mfg. Co., Chicago.
• G. & S. Machine Shop, Detroit, Mich.
Harris, A. R., Hammond, Ind.
• O'Neil-Irwin Mfg. Co., Lake City, Minn.
Ward Machine & Tool Co., Pittsburgh, Penn.
Webb Machine and Tool Co., Coraopolis, Pa.
Weiss & Co., H., New York, N. Y.
• Whitney Metal Tool Co., Rockford, Ill.

Brakes, Power

Bath Company, Cyril, Cleveland.
Cincinnati Shaper Co., Cincinnati.
Cleveland Tramrail Div., Cleveland Crane & Eng. Co., Wickliffe, O.
Dreis Co., Ltd., Edward J., San Carlos, Calif. (Air)
• Dreis & Krump Mfg. Co., Chicago.
Heartley Machine & Tool Co., Toledo, O.
Munton Mfg. Co., Franklin Park, Ill.
• Verson Allsteel Press Co., Chicago.
Weiss & Co., H., New York City.
• Whitney Metal Tool Co., Rockford, Ill.

Brakes, Press (and Dies)

Bath Co., Cyril, Cleveland, Ohio.
• Dreis & Krump Mfg. Co., Chicago, Ill.
Federal Machine & Welder Co., Warren, Ohio.
Pacific Industrial Mfg. Co., Oakland, Calif.

Burring, Hand

• Barth Mfg. Co., Millidale, Conn.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

MACHINES, SHEET METAL WORKING—(Cont'd)

Burring, Power

Independent Pneumatic Tool Co., Aurora, Ill.
• Maplewood Machinery Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.

Cleat Bending, Hand

• Niagara Machine & Tool Works, Buffalo, N. Y.
Riverside Machinery Co., Minneapolis, Minn.
• Smith, R. E., Waukegan, Ill.

Combination, Hand

(Beading, Burring, Turning, Wiring, etc.)

• Barth Mfg. Co., Milldale, Conn.
Frederick Iron & Steel, Inc., Frederick, Md.
Ingram Machinery Co., Picher, Okla.
• Maplewood Machinery Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
Packham Crimper Co., Mechanicsburg, Ohio.
• Peck, Stow & Wilcox Co., Southington, Conn.

Combination, Power

(Beading, Burring, Turning, Wiring, etc.)

• Maplewood Machinery Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.
• Wysong & Miles Co., Greensboro, N. C.

Crimping, Hand

• Barth Mfg. Co., Milldale, Conn.
Ingram Machinery Co., Picher, Okla.
• Merchandising & Manufacturing Associates, Inc., Lancaster, Penn.
• Niagara Machine & Tool Works, Buffalo.
Packham Crimper Co., Mechanicsburg, Ohio.
• Peck, Stow & Wilcox Co., Southington, Conn.

Crimping, Power

• Maplewood Machinery Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.
Streine Tool & Mfg. Co., New Bremen, Ohio.

Dimpling, Electric

York Electric Tool Co., York, Pa.

Double Seaming, Roof, Power

• Lockformer Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
Streine Tool & Mfg. Co., New Bremen, Ohio.

Elbow, Hand

• Barth Mfg. Co., Milldale, Conn.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.

Elbow, Power

• Maplewood Machinery Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.

Filing

Air-Speed Tool Co., Los Angeles. (Pneumatic)
DoALL Company, Des Plaines, Ill.
H & H Research Co., Detroit.

Flanging, Hand

• Barth Mfg. Co., Milldale, Conn.
Excelsior Tool & Machine Co., East St. Louis, Ill.
• Lockformer Co., Chicago.
• Maplewood Machinery Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
"Original" Metal Flanging Machine Works, Seattle, Wash.
Packham Crimper Co., Mechanicsburg, Ohio.
• Peck, Stow & Wilcox Co., Southington, Conn.
• Ward Machinery Co., Chicago.
Weiss & Co., H., New York.

Flanging, Power

Callahan Can Machine Co., Inc., Brooklyn.
Cleveland Punch & Shear Works Co., Cleveland.
Kling Bros. Engineering Works, Chicago, Ill.
• Lockformer Co., Chicago.
• Maplewood Machinery Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
Pacific Industrial Mfg. Co., Oakland, Calif.
• Peck, Stow & Wilcox Co., Southington, Conn.
Swain Mfg. Co., Fred J., St. Louis.
• Ward Machinery Co., Chicago, Ill.
Whiting Corp., Harvey, Ill.

Grooving, Hand

• Barth Mfg. Co., Milldale, Conn.
• Enderle, Inc., Ltd., Frank X., Los Angeles.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.
• Whitney Metal Tool Co., Rockford, Ill.

Grooving, Power

• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.

Gutter Forming, Hand

• Kane & Roach, Inc., Syracuse, N. Y. (Power)
Robertson, F. L., Buffalo.
Streine Tool & Mfg. Co., New Bremen, Ohio.

Lock Forming, Power

• Flagler Mfg. Co., Roy G., Detroit, Mich.
• Kane & Roach, Inc., Syracuse, N. Y.
• Lockformer Co., Chicago.
• Maplewood Machinery Co., Chicago.
Streine Tool & Mfg. Co., New Bremen, Ohio.

Nibbling, Hand

National Machine Tool Co., Racine, Wis.

Nibbling, Power

Berkroy Products, Inc., Burbank, Calif.
Campbell Machine Div. American Chain & Cable Co., Inc., Bridgeport, Conn.
Independent Pneumatic Tool Co., Aurora, Ill. (Portable)
Kling Bros., Engineering Works, Chicago.
Libert Machine Co., Green Bay, Wis.
St. Louis Tool Co., St. Louis.
Savage Co., W. J., Knoxville, Tenn.
• Skilsaw, Inc., Chicago, Ill.
Wales-Strippit Corp., North Tonawanda, N. Y.

Notching, Hand

• Whitney Metal Tool Co., Rockford, Ill.

Pittsburgh Lock Forming

• Lockformer Co., Chicago.
• Maplewood Machinery Co., Chicago.
Riverside Machinery Co., Minneapolis, Minn.

Pittsburgh Lock Opening

• Maplewood Machinery Co., Chicago.

Presses, Blanking

Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Famco Machine Co., Racine, Wis.
Federal Machine & Welder Co., Warren, Ohio.
Henry & Wright Div. Hartford-Empire Co., Hartford, Conn.
• Niagara Machine & Tool Works, Buffalo, N. Y.
Pacific Industrial Mfg. Co., Oakland, Calif.
Zeh & Hahnemann Co., Newark, N. J.

Presses, Forming

Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Famco Machine Co., Racine, Wis.
Federal Machine & Welder Co., Warren, Ohio.
Keckley Co., O. C., Chicago, Ill.
• Niagara Machine & Tool Works, Buffalo, N. Y.
Pacific Industrial Mfg. Co., Oakland, Calif.
Zeh & Hahnemann Co., Newark, N. J.

Presses, Punching

Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Famco Machine Co., Racine, Wis.
Federal Machine & Welder Co., Warren, Ohio.
• Niagara Machine & Tool Works, Buffalo, N. Y.
Pacific Industrial Mfg. Co., Oakland, Calif.
Wales-Strippit Corp., North Tonawanda, N. Y.
Zeh & Hahnemann Co., Newark, N. J.

Punches, Power

Beatty Machine & Mfg. Co., Hammond, Ind.
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Toledo, Ohio.
• Buffalo Forge Co., Buffalo.
Callahan Can Machine Co., Inc., Brooklyn.
Cleveland Punch & Shear Works Co., Cleveland.
Excelsior Tool and Machine Co., East St. Louis, Ill.
Famco Machine Co., Racine, Wis.
Hendley & Whittemore Co., Beloit, Wis.
Henry & Wright Div. Hartford-Empire Co., Hartford, Conn.
Kling Bros. Engineering Works, Chicago.
Maxant Button & Supply Co., Chicago.
New Albany Machine Mfg. Co., New Albany, Ind.
• Niagara Machine & Tool Works, Buffalo.
Progressive Welder Co., Detroit, Mich.
Swaine Mfg. Co., Fred J., St. Louis.
Thomas Machine Manufacturing Co., Pittsburgh.
• Verson Allsteel Press Co., Chicago.
Wales-Strippit Corporation, North Tonawanda, N. Y.
Weiss & Co., H., New York City.
• Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia.

Roll Forming, Power

(For Mouldings and Shapes)

• Dahlstrom Machine Works, Chicago.
• Kane & Roach, Inc., Syracuse, N. Y.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

MACHINES, SHEET METAL WORKING—(Cont'd)

- Lockformer Co., Chicago, Ill.
- Maplewood Machinery Co., Chicago.
  Yoder Company, Cleveland.

Saws, Band, Sheet Metal Cutting

Acme Saw Works & Supply Co., Los Angeles, Calif.
Atkins and Co., E. C., Indianapolis. (blades)
Barnes Co., Inc., W. O., Detroit, Mich.
Disston & Sons, Inc., Henry, Philadelphia, Penn.
DoAll Company, Des Plaines, Ill.
Grob Brothers, Grafton, Wis.
Kalamazoo Tank & Silo Co., Kalamazoo, Mich.
Millers Falls Company, Greenfield, Mass.
Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
Tannewitz Works, Grand Rapids, Mich.
Thompson & Son Co., Henry G., New Haven, Conn.
Wells Mfg. Corp., Three Rivers, Mich.

Saws, Hack, Power

Acme Saw Works & Supply Co., Los Angeles, Calif.
Air-Speed Tool Co., Los Angeles. (Pneumatic)
Atkinson and Co., E. C., Indianapolis, Ind. (Blades)
Barnes Co., Inc., W. O., Detroit, Mich.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Precision Machine Co., Chicago.
Disston & Sons, Inc., Henry, Tacony Sta., Philadelphia.
H & H Research Co., Detroit.
Mid-States Welder Mfg. Co., Chicago, Ill.
Racine Tool & Machine Co., Racine, Wis.
- RCS Tool Sales Corp., Joliet, Ill. (Portable)
  Robertson, F. L., Buffalo.
  Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
- Skilsaw, Inc., Chicago, Ill.

Seaming, Hand

- Enderle, Inc., Ltd., Frank X., Los Angeles.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.
  Weiss & Co., H., New York.
- Whitney Metal Tool Co., Rockford, Ill.

Seaming, Power

Bliss Co., E. W., Detroit, Mich.
Callahan Can Machine Co., Inc., Brooklyn.
- Lockformer Co., Chicago.
- Maplewood Machinery Co., Chicago.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.
  Streine Tool & Mfg. Co., New Bremen, Ohio.
  Swain Mfg. Co., Fred J., St. Louis.

Setting Down, Hand

- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.

Setting Down, Power

Callahan Can Machine Co., Inc., Brooklyn.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.

Shears, Circle, Hand

- Barth Manufacturing Company, Milldale, Conn.
  Berkroy Products, Inc., Burbank, Calif.
  Berridge Shear Co., Sturgis, Mich.
  Compton Shear Co., W. H., Newark, N. J.
- Crescent Tool Co., Jamestown, N. Y.
  Klenk's Aviation Snips, Wilmington, Del.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.

Shears, Circle, Power

Bliss Co., E. W., Detroit.
H-A Mfg. Co., York, Penn.
Kling Bros. Engineering Works, Chicago.
Libert Machine Co., Green Bay, Wis.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.
  Whiting Corp., Harvey, Ill.

Shears, Electric, Portable

Black & Decker Mfg. Co., Towson, Md.
- Merchandising & Manufacturing Associates, Inc., Lancaster, Penn. (Electric or pneumatic drill attachment).
- O'Neil-Irwin Manufacturing Co., Lake City, Minn.
- Skilsaw, Inc., Chicago.
  Stanley Electric Tool Div., The Stanley Works, New Britain, Conn.
  Van Dorn Electric Tool Co., Towson, Md.
  York Electric and Machine Company, York, Pa.

Shears, Rotary, Slitting, Hand

- Barth Manufacturing Company, Milldale, Conn.
- Marshalltown Manufacturing Co., Marshalltown, Ia.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Ward Machinery Co., Chicago.
  Whiting Corp., Harvey, Ill.

Shears, Rotary, Slitting, Power

Bliss Co., E. W., Toledo, Ohio.
Kling Bros. Engineering Works, Chicago.
- Niagara Machine & Tool Works, Buffalo, N. Y.
  Yoder Company, Cleveland.

Shears, Squaring, Foot

- Acme Equipment Co., Inc., Chicago.
- Barth Manufacturing Company, Milldale, Conn.
  Bertsch & Co., Cambridge City, Ind.
  Dreis Co., Ltd., Edward J., San Carlos, Calif.
  Famco Machine Co., Racine, Wis.
  Frederick Iron & Steel, Inc., Frederick, Md.
  Highland Engineering Co., Santa Monica, Calif.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Whitney Metal Tool Co., Rockford, Ill.
- Wysong & Miles Co., Greensboro, N. C.

Shears, Squaring, Power

- Acme Equipment Co., Inc., Chicago, Ill.
- Barth Manufacturing Company, Milldale, Conn.
  Bertsch & Co., Cambridge City, Ind.
  Bliss & Co., E. W., Toledo, Ohio.
  Cincinnati Shaper Co., Cincinnati.
  Cleveland Punch & Shear Works Co., Cleveland.
  Cleveland Tramrail Div., Cleveland Crane & Eng. Co., Wickliffe, Ohio.
  Diamond Machine Tool Co., Los Angeles, Calif.
  Dreis Co., Ltd., Edward J., San Carlos, Calif.
  Excelsior Tool and Machine Co., East St. Louis, Ill.
  Famco Machine Co., Racine, Wis.
  Frederick Iron & Steel, Inc., Frederick, Md.
- Niagara Machine & Tool Works, Buffalo.
- O'Neil-Irwin Manufacturing Co., Lake City, Minn.
- Peck, Stow & Wilcox Co., Southington, Conn.
  Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
  Streine Tool & Mfg. Co., New Bremen, O.
  Thomas Machine Manufacturing Co., Pittsburgh. (¼ in. and heavier)
- Whitney Metal Tool Company, Rockford, Ill.
- Wysong & Miles Co., Greensboro, N. C.

Slip Roll Forming, Hand

- Barth Manufacturing Company, Milldale, Conn.
  Berkroy Products, Inc., Burbank, Calif.
  Bertsch & Co., Cambridge City, Ind.
  Frederick Iron & Steel, Inc., Frederick, Md.
  Hendley & Whittemore Co., Beloit, Wis.
- Milton Equipment Co., Philadelphia.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.
  Riverside Machinery Co., Minneapolis, Minn.
- San Angelo Foundry & Machine Company, San Angelo, Tex.
- Wysong & Miles Co., Greensboro, N. C.

Slip Roll Forming, Power

Bertsch & Co., Cambridge City, Ind.
Hendley & Whittemore Co., Beloit, Wis.
- Maplewood Machinery Co., Chicago.
- Milton Equipment Co., Philadelphia.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Reed Engineering Company, Carthage, Mo.
- San Angelo Foundry & Machine Company, San Angelo, Tex.
- Wysong & Miles Co., Greensboro, N. C.

Slitting, Hand

- Barth Manufacturing Company, Milldale, Conn.
  Berkroy Products, Inc., Burbank, Calif.
  Bertsch & Co., Cambridge City, Ind.
- Beverly Shear Mfg. Co., Chicago, Ill.
- Buffalo Forge Co., Buffalo.
  Hendley & Whittemore Co., Beloit, Wis.
  Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.
- Ward Machinery Co., Chicago.
- Whitney Metal Tool Co., Rockford, Ill.

Slitting, Power

Bertsch & Co., Cambridge City, Ind.
Besco Mfg. Co., Cincinnati, Ohio.
Bliss Co., E. W., Toledo, Ohio.
- Buffalo Forge Co., Buffalo.
  Callahan Can Machine Co., Inc., Brooklyn.
- Dahlstrom Machine Works, Chicago.
  Hendley & Whittemore Co., Beloit, Wis.
- Kane & Roach, Inc., Syracuse, N. Y.
  Libert Machine Co., Green Bay, Wis.
- Maplewood Machinery Co., Chicago.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.
  St. Louis Tool Co., St. Louis.
  Streine Tool & Mfg. Co., New Bremen, Ohio.
  Whiting Corp., Harvey, Ill.
  Yoder Co., Cleveland.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

MACHINES, SHEET METAL WORKING—(Cont'd)

Wiring, Hand

- Barth Mfg. Co., Millidale, Conn.
- Maplewood Machinery Co., Chicago.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.

Wiring, Power

Callahan Can Machine Co., Inc., Brooklyn.
- Maplewood Machinery Co., Chicago.
- Niagara Machine & Tool Works, Buffalo.
- Peck, Stow & Wilcox Co., Southington, Conn.

MALLETS, METAL WORKING

Belmont Smelting & Refining Works, Inc., Brooklyn (Lead)
Berns Company, Otto, Rochester, N. Y. (Dogwood)
Chicago Rawhide Mfg. Co., Chicago, Ill.
Densewood Corporation, Elkhorn, Wis. (Wood)
Goodrich Company, B. F., Akron, Ohio. (Rubber)
Greene, Tweed & Co., New York, N. Y. (Plastic, rawhide, composition, copper & babbitt)
Lignum-Vitae Products Corp., Jersey City, N. J.
- Maplewood Machinery Co., Chicago.

Morey, Dan, Los Angeles.
New Plastic Corporation, Hollywood, Calif. (Plastic)
- Niagara Machine & Tool Works, Buffalo. (Hickory)

Schmidgall Mfg. Co., Inc., Peoria, Ill. (Plastic)
Southwest Manufacturing Co., Santa Ana, Calif. (Pyralin tipped)
Stanley Tools, New Britain, Conn. (Soft face hammers)
Stossel & Sons Co., Carl, Front Royal, Va. (Hickory & dogwood)

MATS, EVAPORATIVE COOLER

Morey, Dan, Los Angeles. (Aspen)
- Owens-Corning Fiberglas Corporation, Toledo, O. (Glass)
- Palmer Manufacturing Corp., Phoenix, Ariz.

METAL CEILINGS

See Ceilings, Metal

METAL HOSE

See Hose

METAL SPRAY GUNS

See Guns, Spray, Metals

METAL STAMPINGS

See Stampings, Metal

METALS, PERFORATED, SHEET AND PLATE

Beckley Perforating Co., Garwood, N. J.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Chicago Perforating Co., Chicago.
Cross Engineering Co., Carbondale, Pa.
Diamond Manufacturing Co., Wyoming, Pa.
Erdle Perforating Co., Rochester, N. Y.
- Harrington & King Perforating Co., Chicago, Ill.

Harrison Sheet Steel Co., Chicago.
Hendrick Mfg. Co., Carbondale, Pa.
Johnston & Chapman Co., Chicago.
Littleford Bros., Inc., Cincinnati.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Mundt & Sons, Charles, Jersey City, N. J.
Nortmann-Duffke Co., Milwaukee.
Penn Metal Co., Inc., New York, N. Y.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Rigidized Metals Corp., Buffalo, N. Y.
- Standard Stamping & Perforating Co., Chicago.

Wheeling Corrugating Co., Wheeling, W. Va.
Wickwire Spencer Steel Div., Colorado Fuel & Iron Corp., New York, N. Y.

METERS, AIR VELOCITY, DIRECT READING

- Bacharach Industrial Instrument Co., Pittsburgh, Penn.

Detroit Air Conditioning Service Co., Detroit, Mich.
Hays Corporation, Michigan City, Ind.
Illinois Testing Laboratories, Inc., Chicago.
Taylor Instrument Companies, Rochester, N. Y.

MONORAIL SYSTEMS

(Track, Trolley, Hoist, Accessories)

American MonoRail Co., Cleveland.
Chicago Tramrail Co., Chicago.
Cleveland Tramrail Div., The Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Ferdon Equipment Engineering Co., Hillside, N. J.
Louden Machinery Company, Fairfield, Iowa.
Philadelphia Tramrail Co., Philadelphia.
Reading Chain & Block Corporation, Reading, Pa.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Webb Co., Jervis B., Detroit.
Wright Hoist Div., American Chain & Cable Co., Inc., York, Penn.

MOTOR TRUCKS

See Trucks, Motor

MOTORS, DUCT, DAMPER, MODULATING OR PROPORTIONING

See Controls

MOTORS, DUCT, DAMPER, TWO POSITION

See Controls

MOTORS, DRAFT, DAMPER, ELECTRICAL

See Controls

MOTORS, ELECTRIC

Fractional H.P.

Barber-Colman Co., Rockford, Ill.
Bodine Electric Co., Chicago.
Brown-Brockmeyer Co., Inc., Dayton, Ohio.
Burke Electric Company, Erie, Pa.
Canatsey Electric Mfg. Co., Kansas City, Mo.
Century Electric Co., St. Louis.
Crozier Machine Tool Co., Hawthorne, Calif.
- Delco Appliance Div. General Motors Corp., Rochester, N. Y.
- Delco Products Division, General Motors Corp., Dayton, Ohio.

Diehl Mfg. Co., Somerville, N. J.
Eastern Air Devices, Inc., Brooklyn.
Electric Motor Corp., Div., Howard Industries, Inc., Racine, Wis.
Electric Sprayit Co., Sheboygan, Wis.
- Emerson Electric Mfg. Co., St. Louis.

Fairbanks, Morse & Co., Chicago, Ill.
Fasco Industries, Inc., Rochester, N. Y.
Franklin Electric Co., Inc., Bluffton, Ind.
General Die and Stamping Company, New York City
- General Electric Co., Schenectady, N. Y.

Hansen Mfg. Co., Inc., Princeton, Ind.
Holtzer-Cabot Electric Co., Boston.
Jack & Heintz Precision Industries, Inc., Cleveland, Ohio.
Lamb Electric Company, Kent, Ohio.
Leland Electric Co., Inc., Dayton, Ohio.
Marathon Electric Mfg. Corp., Wausau, Wis.
Master Electric Co., Dayton, Ohio.
Morey, Dan, Los Angeles, Calif.
Ohio Electric Mfg. Co., Cleveland.
Packard Electric Div., General Motors, Corp., Warren, Ohio.
- Peerless Electric Co., Warren, Ohio.

Pioneer Gen-E-Motor, Chicago.
Piqua Machine & Manufacturing Co., Piqua, Ohio. (Submersible)
Redmond Co., A. G., Owosso, Mich.
Reynolds Electric Company, River Grove, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Rotor Corporation, Dayton, Ohio.
Sampsel Time Control, Inc., Spring Valley, Ill.
Signal Electric Mfg. Co., Menominee, Mich.
Small Motors, Inc., Chicago.
Speedway Mfg. Co., Cicero, Ill.
Torq Electric Corp., Bedford, Ohio.
Victor Electric Products, Inc., Cincinnati.
Wagner Electric Corp., St. Louis.
Westinghouse Electric Corporation, Pittsburgh, Pa.
Whirlaway Motors, Tippecanoe City, Ohio.

1 H.P. and Over

Allis-Chalmers Mfg. Co., Milwaukee.
Allis Co., Louis, Milwaukee.
Baldor Electric Co., St. Louis.
Bogue Electric Co., Paterson, N. J.
Brown-Brockmeyer Co., Inc., Dayton, Ohio.
Burke Electric Co., Erie, Pa.
Century Electric Co., St. Louis.
Crocker-Wheeler Elec. Mfg. Co., Ampere, N. J.
- Delco Products Division, General Motors Corp., Dayton, Ohio.

Diehl Mfg. Co., Somerville, N. J.
Electric Machinery Mfg. Co., Minneapolis.
Electro Dynamic Div., Electric Boat Co., Bayonne, N. J.
- Emerson Electric Mfg. Co., St. Louis.

Fairbanks, Morse & Co., Chicago, Ill.
- General Electric Co., Schenectady, N. Y.

Holtzer-Cabot Electric Co., Boston.
Ideal Electric & Mfg. Co., Mansfield, Ohio.
Imperial Electric Co., Akron, Ohio.
Jackson Co., Byron, Los Angeles (Submersible).
Leland Electric Co., Inc., Dayton, Ohio.
Marathon Electric Mfg. Corp., Wausau, Wis.
Marble-Card Electric Co., Gladstone, Mich.

- Advertisement in this issue. See Index to Advertisers, page 95-D.

Master Electric Co., Dayton, Ohio.
• Peerless Electric Co., Warren, Ohio.
Philadelphia Gear Works, Inc., Philadelphia. (Geared)
Reliance Elec. & Engr. Co., Cleveland.
Robbins & Meyers, Inc., Springfield, Ohio.
Star Electric Motor Co., Bloomfield, N. J.
Sterling Electric Motors, Inc., Los Angeles.
U. S. Electrical Motors, Inc., Los Angeles.
Valley Electric Co., St. Louis.
Wagner Electric Corp., St. Louis.
Westinghouse Electric Corporation, Pittsburgh.

MOULDING AND TRIM, ORNAMENTAL, FOR CABINETS AND CASINGS

Alden Manufacturing Co., Painesville, O.
Allmetal Weatherstrip Co.,Chicago.
Aluminum Co. of America, Pittsburgh.
Aluminum Goods Mfg. Co., Manitowoc, Wis. (aluminum and stainless)
American Insulator Corporation, New Freedom,Pa. (plastic)
Brasco Manufacturing Co., Harvey, Ill.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Detroit Moulding Div., L. A. Young Spring & Wire Corp., Detroit.
Edwards Manufacturing Co., Inc., Cincinnati.
Empire Door Co., Inc., New York City.
Extruded Plastics, Inc., Norwalk, Conn.
Friedley-Voshardt Co., Chicago.
Herron-Zimmers Moulding Co., Detroit.
Jamestown Metal Corp., Jamestown, N. Y.
Kawneer Co., Niles, Mich.
Maysteel Products, Inc., Milwaukee.
• Miller & Doing, Brooklyn, N. Y.
• National Metal Fabricators, Chicago, Ill.
Pyramid Mouldings, Inc., Chicago.
• Revere Copper & Brass Incorporated, New York City.
Rigidized Metals Corp., Buffalo, N. Y.
Sponge Rubber Products Co., Shelton, Conn.
United States Stoneware Co., Akron, Ohio.
Werner Co., Inc., R. D., New York City.(Aluminum plastic)

MOULDINGS AND TRIM FOR SIDING AND SHINGLES

Allmetal Weatherstrip Co., Chicago (Zinc)
Appleton Supply Co., Inc., Appleton, Wis. (Aluminum, zinc)
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
• Inland Steel Products Co., Milwaukee. (Corners)
Klauer Mfg. Co., Dubuque, Iowa.
New Delphos Mfg. Co., Delphos, Ohio. (Corners)
Penn Supply & Metal Corp., Philadelphia, Penn.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Royal-Apex Mfg. Corp., Brooklyn. (Bull Nose Corner Bead)
Sioux Steel Co., Sioux Falls, S. D.
Werner Co., R. D., Inc., New York, N. Y.

NAILS

Aluminum

Aluminum Co. of America, Pittsburgh.
Hassall, Inc., John, Brooklyn.
Independent Nail & Packing Co., Bridgewater, Mass.
• Kaiser Aluminum & Chemical Corp., Oakland, Calif.
Maze Company, W. H., Peru, Ill.
Potts-Farrington Co., Philadelphia, Penn.
Reynolds Metals Co., Louisville, Ky.

Copper

American Steel & Wire Co., Cleveland.
Chase Brass and Copper Co., Inc., Waterbury, Conn.
Columbia Steel Co., San Francisco, Calif.
Conklin Brass & Copper Co., Inc., T. E., New York City.
Copperweld Steel Co., Glassport, Pa.
Harper Co., H. M., Morton Grove, Ill.
Hassall, Inc., John, Brooklyn.
• Hussey & Co., C. G., Pittsburgh.
Independent Nail & Packing Co., Bridgewater, Mass.
Maze Co., W. H., Peru, Ill.

Hardened Masonry

American Steel & Wire Co., Cleveland.
Hillwood Manufacturing Co., Cleveland. (Concrete Pinsers)
Independent Nail & Packing Co., Bridgewater, Mass.
• Parker-Kalon Corp., New York City.
Rawlplug Co., Inc., New York City. (Bolts)
Tremont Nail Co., Wareham, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Wood Steel Co., Alan, Conshohocken, Penn.

Roofing

American Steel & Wire Co., Cleveland.
Berger Mfg. Div. of Republic Steel Corp., Canton, O.
• Bethlehem Steel Co., Bethlehem, Pa.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Columbia Steel Co., San Francisco.
Conklin Brass & Copper Co., Inc., T. E., New York City. (Copper)
• Continental Steel Corp., Kokomo, Ind. (Steel)
Copperweld Steel Company, Glassport, Penn. (Copper coated steel)
Denston Co., Chicago. (Steel, Aluminum)
Dickson Weatherproof Nail Co., Evanston, Ill. (Lead headed).
Globe Iron Roofing & Corrugating Co., Newport, Ky.
Hassall, Inc., John, Brooklyn.
• Hussey & Co., C. G., Pittsburgh, Penn. (Copper)
Independent Nail & Packing Co., Bridgewater, Mass.
• Inland Steel Products Co., Milwaukee, Wis. (Steel wire)
Jones & Laughlin Steel Corp., Pittsburgh.
• Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Maze Co., W. H., Peru, Ill.
New Delphos Manufacturing Co., Delphos, Ohio. (Galv. steel)
• Republic Steel Corp., Cleveland.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Screw, Hardened

American Steel & Wire Co., Cleveland.
Denston Co., Chicago, Ill. (Pallet)
Dickson Weatherproof Nail Co., Evanston, Ill.
Hillwood Manufacturing Co., Cleveland. (Drive)
Independent Nail & Packing Co., Bridgewater, Mass.
Industrial Screw Company, Chicago.
Maze Co., W. H., Peru, Ill.
• Parker-Kalon Corp., New York City.
• Republic Steel Corp., Cleveland.

Stainless Steel

American Steel & Wire Co., Cleveland.
Harper Co., H. M., Morton Grove, Ill.
Hassall, Inc., John, Brooklyn.
Independent Nail & Packing Co., Bridgewater, Mass.
Maze Co., W. H., Peru, Ill.
• Republic Steel Corp., Cleveland, O.
Tremont Nail Co., Wareham, Mass.

Zinc Coated

American Steel & Wire Co., Cleveland.
Berger Mfg. Div. of Republic Steel Corp., Canton, O.
• Bethlehem Steel Co., Bethlehem, Pa.
Columbia Steel Co., San Francisco.
• Continental Steel Corp., Kokomo, Ind.
Dickson Weatherproof Nail Co., Evanston, Ill.
Hassall, Inc., John, Brooklyn.
Independent Nail & Packing Co., Bridgewater, Mass.
• Inland Steel Products Co., Milwaukee.
Jones & Laughlin Steel Corp., Pittsburgh.
Maze Co., W. H., Peru, Ill.
New Delphos Mfg. Co., Delphos, Ohio.
• Republic Steel Corp., Cleveland.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Tremont Nail Co., Wareham, Mass.
Wheeling Steel Corp., Wheeling, W. Va.

NIBBLERS

See Machines, Nibbling

NIGHT AIR FANS

See Fans, Night Air Cooling

NOZZLES, OIL BURNER

Balloffet Dies & Nozzle Co., Inc., Guttenberg, N. J.
Benjamin Air Rifle Co., St. Louis, Mo.
Boston Machine Works Co., Lynn, Mass. (Also nozzle kit)
Delavan Mfg. Co., Des Moines, Iowa.
Hasko Utilities Co., New York, N. Y.
Monarch Mfg. Works, Inc., Philadelphia, Penn.

NOZZLES, SPRAY, WATER

American Cooling Tower Co., Kansas City, Mo.
April Showers Co., Inc., Washington, D. C. (Roof cooling)
Balloffet Dies & Nozzle Co., Inc., Guttenberg, N. J.
Benjamin Air Rifle Co., St. Louis.
Binks Mfg. Co., Chicago.
Blower Application Co., Milwaukee.
• Buffalo Forge Co., Buffalo.
Chain Belt Co., Milwaukee.
• Clarage Fan Co., Kalamazoo, Mich.
Delavan Mfg. Co., Des Moines, Iowa.
Electric Sprayit Co., Sheboygan, Wis.
Handelan Air Washer Co., Minneapolis.
Link-Belt Co., Chicago.
• Maid-O'-Mist, Inc., Chicago.
Marley Co., Inc., Kansas City, Kans.
Martocello & Co., Jos. A., Philadelphia.
Monarch Mfg. Works, Inc., Philadelphia.
Phillips Cooling Tower Co., Inc., New York City.
Plummer Spray Equipment Co., Napoleon, Ohio.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Rego Mfg. Co., Rochester, N. Y.
Ross Sprinkler Co., Pasadena, Calif.
Spray Engineering Co., Somerville, Mass.
Spraying Systems Co., Bellwood, Ill.
Supreme Electric Products Corp., Rochester, N. Y.
Thermal Industries, Indio, Calif.
U. S. Gutta Percha Paint Co., Providence, R. I.
Water Cooling Corp., New York City.
Water Cooling Equipment Corp., St. Louis.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Yarnall-Waring Co., Philadelphia.

ODOR ADSORBERS

See Adsorbers, Odor

OIL BURNER CONTROLS

See Controls; Control Systems

OIL BURNER FITTINGS AND ACCESSORIES

See Fittings and Accessories, Oil Burner; Filters; Gauges; Nozzles

OIL BURNERS

See Burners, Oil

ORNAMENTS, SHEET METAL

See Mouldings and Trim, Ornamental

OZONE APPARATUS

A & J Co., Chicago.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Coroaire Heater Corp., Cleveland, Ohio.
Electroaire Corp., Long Island City.
Montgomery Bros., San Francisco.
Norwood Filtration Co., Holyoke, Mass.
Scottdale Ozone Company, Scottdale, Pa.

PAINT, ROOFING

American-Marietta Co., Chicago.
Baer Brothers, New York City.
Barrett Div., Allied Chemical & Dye Corp., New York, N. Y. (Pitch)
Blue Ridge Talc Co., Inc., Henry, Va.
Cabot, Inc., Samuel, Boston.
Calbar Paint & Varnish Co., Philadelphia.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Carter Paint Co., Liberty, Ind.
Cheeseman-Elliot Co., Inc., Brooklyn.
Clinton Metallic Paint Co., Clinton, N. Y. (Red metallic)
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Continental Products Co., Euclid, O. (All Kinds)
Debevoise Co., Brooklyn.
Devoe & Raynolds Co., Inc., New York City.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Eagle-Picher Co., Cincinnati, Ohio.
Evercrete Corp., New York City.
Flintkote Co., New York City.
Ford Roofing Products Co., Chicago.
Glidden Co., Cleveland.
Heath & Milligan Mfg. Co., Div. of Glidden Co., Chicago.
Hetzel Roofing Products Co., Newark, N. J.
Horn Co., Inc., A. C., Long Island City, N. Y.
Inter-Coastal Paint Co., East St. Louis, Ill.
Iowa Paint Mfg. Co., Des Moines, Ia. (Asphalt)
Koppers Co., Pittsburgh. (Bituminous)
Lastik Products Co., Inc., Pittsburgh. (Asphalt, Fibre)
Lehon Co., Chicago.
Lexington Supply Co., Cleveland, Ohio.
Lucas & Co., Inc., John, Philadelphia.
Lyon, Conklin & Co., Inc., Baltimore.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
Midland Paint & Varnish Co., Cleveland, Ohio.
Mortell Co., J. W., Kankakee, Ill.
National Mfg. Corp., Tonawanda, N. Y.
Nebel Manufacturing Co., Cleveland.
North American Fibre Products Co., Cleveland.
Ohmiac Paint & Refining Co., Chicago, Ill. (Asphalt)
Pecora Paint Co., Philadelphia, Penn.
Pittsburgh Plate Glass Co., Pittsburgh.
Potts-Farrington Co., Philadelphia, Penn.
Presstite Engineering Co., St. Louis, Mo.
Prole & Coogan Heating Co., Pittsburgh.
Quigley Co., Inc., New York City.
Reilly Tar & Chemical Corp., Indianapolis.
Ruberoid Co., New York City.
Rutland Fire Clay Co., Rutland, Vt. (Asphalt)
Sherwin-Williams Co., Cleveland.
Sipe & Co., James B., Pittsburgh.
Sonneborn Sons, Inc., L., New York City.
Southern States Iron Roofing Co., Savannah, Ga.
Southport Paint Co., Savannah, Ga.
Tamms Industries Inc., Chicago, Ill.
Thompson & Co., Oakmont (Pittsburgh Dist.), Pa.
Toch Brothers, Inc., Staten Island, N. Y.
Tropical Paint & Oil Co., Cleveland.
Truscon Laboratories, Detroit.

PAINT, SHEET METAL

(Aluminum, Finish Coat, Prime Coat, etc.)

American-Marietta Co., Chicago.
Atlas Powder Co., North Chicago, Ill.
Baer Brothers, New York, N. Y. (Aluminum)
Barrett Div., Allied Chemical & Dye Corp., New York City.
Blue Ridge Talc Co., Inc., Henry, Va.
Cabot, Inc., Samuel, Boston, Mass. (Aluminum, metal protecting)
Calbar Paint & Varnish Co., Philadelphia.
Carey Co., Philip, Cincinnati, Ohio. (Aluminum)
Carter Paint Co., Liberty, Ind.
Champion Bronze Powder & Paint Co., Chicago, Ill.
Cheeseman-Elliot Co., Inc., Brooklyn, N. Y.
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Continental Products Co., Euclid, O.
Cordo Chemical Corp., Norwalk, Conn. (Acid and alkali resistant coatings)
Devoe & Raynolds Co., Inc., New York, N. Y. (Aluminum, finish coat)
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Aluminum; prime & finish coat)
Eagle-Picher Co., Cincinnati, Ohio. (Aluminum, finish coat)
Flood Company, Cleveland.
Glidden Co., Cleveland, Ohio. (Aluminum, finish coat)
Hague & Co., Alfred, Brooklyn, N. Y. (Aluminum, finish coat)
Heath & Milligan Mfg. Co., Div. of Glidden Co., Chicago.
Hetzel Roofing Products Co., Newark, N. J. (Aluminum, finish coat)
Hilo Varnish Corp., Brooklyn, (Zinc Chromate)
Horn Co., Inc., A. C., Long Island City, N. Y. (Aluminum, finish coat)
Illinois Bronze Powder Co., Inc., Chicago, Ill.
Inter-Coastal Paint Co., East St. Louis, Ill.
Iowa Paint Mfg. Co., Des Moines, Ia.
Irvington Varnish & Insulator Co., Irvington, N. J. (Finish coat)
Koppers Co., Inc., Pittsburgh, Penn. (Aluminum, finish coat)
Lehon Co., Chicago, Ill. (Aluminum)
Lucas & Co., Inc., John, Philadelphia.
Mann & Waldstein Co., Newark, N. J.
Midland Paint & Varnish Co., Cleveland, Ohio. (Aluminum, finish coat)
National Engineering Products, Inc., Washington, D. C.
National Lead Co., New York, N. Y. (Prime, finish coat)
National Mfg. Corp., Tonawanda, N. Y.
Nebel Manufacturing Co., Cleveland, Ohio. (Aluminum, finish coat)
North American Fibre Products Co., Cleveland, Ohio. (Finish coat).
O'Brien Corp., South Bend, Ind. (Aluminum, finish coat)
Ohmiac Paint & Refining Co., Chicago.
Paraffine Companies, Inc., San Francisco, Calif. (Aluminum, prime, finish coat)
Patterson-Sargent Co., Cleveland.
Pecora Paint Co., Philadelphia, Penn. (Aluminum, finish coat).
Pittsburgh Plate Glass Co., Pittsburgh.
Presstite Engineering Co., St. Louis.
Prole & Coogan Heating Co., Pittsburgh.
Quigley Co., Inc., New York, N. Y. (Aluminum, finish coat)
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Robertson Co., H. H., Pittsburgh.
Roxalin Flexible Finishes, Inc., Elizabeth, N. J.
Sanvin Chemical Products Co., Moline, Ill.
Sherwin-Williams Co., Cleveland, Ohio. (Aluminum)
Sipe & Co., James B., Pittsburgh.
Socony Paint Products Div., Socony-Vacuum Oil Co., Inc., New York City.
Sonneborn Sons, Inc., L., New York, N. Y. (Aluminum, finish coat)
Southern States Iron Roofing Co., Savannah, Ga.
Southport Paint Co., Savannah, Ga.
Speco, Inc., Cleveland, Ohio. (Aluminum)
Tamms Industries, Inc., Chicago, Ill. (Finish coat)
Thompson & Co., Oakmont, Penn. (Aluminum, finish coat)
Toch Brothers, Inc., Staten Island, N. Y. (Finish coat).
Tropical Paint & Oil Co., Cleveland.
Truscon Laboratories, Detroit, Mich. (Aluminum, prime, finish coat)
Turco Products, Inc., Los Angeles.
United Chromium, Inc., New York, N. Y. (Aluminum, finish coat)
United Gilsonite Laboratories, Scranton, Pa.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

U. S. Gutta Percha Paint Co., Providence, R. I. (Aluminum, finish coat)
United States Stoneware Company, Akron, Ohio. (Aluminum, finish coat)
Wilbur & Williams Co., Boston, Mass.

PAINT SPRAY GUNS

See Guns, Spray, Paint

PAPER, ASBESTOS

Acme Asbestos Covering & Flooring Co., Chicago.
Alfol Division, Reflectal Corporation, New York City.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Johns-Manville, New York City.
Keasbey & Mattison Co., Ambler, Pa.
Norristown Magnesia & Asbestos Co., Norristown, Pa.
Ruberoid Co., New York City.
● Sall Mountain Co., Chicago.
Standard Asbestos Mfg. Co., Chicago.
● Wilson, Inc., Grant, Chicago.

PASTE, ASBESTOS PAPER

Acme Asbestos Covering & Flooring Co., Chicago.
Arabol Manufacturing Co., New York City. (Insulation Adhesive)
Clark Stek-O Corp., Rochester, N. Y.
Lyon, Conklin & Co., Inc., Baltimore.
Norristown Magnesia & Asbestos Co., Norristown, Pa.
Rutland Fire Clay Co., Rutland, Vt.
● Sall Mountain Co., Chicago.
Standard Asbestos Mfg. Co., Chicago.
Western Mineral Products Co., Minneapolis, Minn.
● Wilson, Inc., Grant, Chicago.

PATTERNS, BLUE PRINT, ELBOWS, SKYLIGHTS AND FITTINGS

Gray, G. L., New Haven, Conn.

PERFORATED METAL

See Metals, Perforated, Sheet and Plate

PILLOW BLOCKS

See Bearings, Pillow Block

PILOTS, GAS BURNER

See Controls

PIPE

Conductor

● Ajax Furnace Fitting Co., Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Barnes Metal Products Co., Chicago.
● Berger Bros. Co., Philadelphia.
Berger Mfg. Div. of Republic Steel Corp., Canton, O.
Braden Mfg. Co., Terre Haute, Ind.
Campbell Stainless Products Co., Washington, Penn.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Downs-Smith Brass & Copper Co., New York City.
Edwards Manufacturing Co., Inc., Cincinnati.
● Enderle, Inc., Ltd., Frank X., Los Angeles.
Globe Iron Roofing & Corrugating Co., Newport, Ky.
Herbert & Sons R. D., Nashville, Tenn.
● Hussey & Co., C. G., Pittsburgh. (Copper)
● Inland Steel Products Co., Milwaukee, Wis. (Copper & galv.)
Johns-Manville, New York City.
Klauer Manufacturing Co., Dubuque, Ia.
● Krauser-Boyd, Inc., North Tonawanda, N. Y.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lamb & Ritchie Co., Cambridge, Mass.
Lyon, Conklin & Co., Inc., Baltimore.
Matthiessen & Hegeler Zinc Co., La Salle, Ill. (Zinc & galv. steel)
● Miller & Doing, Brooklyn.
National Tube Company, Pittsburgh.
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Northwest Metal Products, Inc., Seatle, Wash. (Galv. & copper)
● Obdyke, Inc., B. P., Philadelphia, Penn.
Overly Mfg. Co., Greensburg, Penn.
Penn Supply & Metal Corp., Philadelphia, Penn. (Galv)
Reeves Steel & Mfg. Co., Dover, O.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riggin Metal Products, Inc., Kankakee, Ill.
St. Paul Corrugating Co., St. Paul, Minn. (Galv. steel)
Schecter Brothers Co., Philadelphia.
Schoedinger, F. O., Columbus, Ohio. (Galv., stainless steel, and copper)
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sheet Metal Products Co., Peoria, Ill.
Souther Iron Co., B. E., St. Louis.
● Thor Metal Products Co., Inc., Syracuse, N. Y. (Galv.)
Tiffin Art Metal Co., Tiffin, Ohio. (Galv., copper, stainless steel, aluminum)
Wheeling Corrugating Co., Wheeling, W. Va.
● Williams-Wallace Co., San Francisco, Calif.
York Corrugating Co., York, Pa.

Furnace

Acer & Whedon, Inc., Medina, N. Y.
● Acme Manufacturing Company, Philadelphia.
Adelta Mfg. Co., Philadelphia, Penn.
● Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Ballonoff Metal Products Co., Cleveland.
Berger Furnace Mfg. Co., Pittsburgh.
Biersach & Niedermeyer Co., Milwaukee.
Braden Mfg. Co., Terre Haute, Ind.
Champion Furnace Pipe Co., Peoria, Ill.
● Char-Gale Mfg. Co., Minneapolis.
Chicago Furnace Supply Co., Chicago.
Cincinnati Stamping & Furnace Co., Cincinnati.
● Clayton & Lambert Mfg. Co., Louisville, Ky.
Corbman Bros., Inc., Philadelphia.
Detroit Safety Furnace Pipe Co., Detroit.
● Eisbach, Albert N., Dubuque, Iowa.
● Enderle, Inc., Ltd., Frank X, Los Angeles.
Excelsior Steel Furnace Co., Chicago.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
● Gray Metal Products, Inc., Rochester, N. Y.
Green Colonial Furnace Co., Des Moines, Ia.
● Henry Furnace Co., Medina, Ohio.
Herbert & Sons, R. D., Nashville, Tenn.
Home Furnace Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
● Inland Steel Products Co., Milwaukee.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Johns-Manville, New York City.
Keith Furnace Co., Des Moines, Ia.
Krauser-Boyd, Inc., North Tonawanda, N. Y.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lennox Furnace Co., Marshalltown, Ia.
Los Angeles Sheet Metal Manufacturing Co., Inc., Los Angeles.
Lyon, Conklin & Co., Inc., Baltimore.
● Made-Rite Co., Inc., Newport, Ky.
● Majestic Co., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
● Meyer & Bro. Co., F., Peoria, Ill.
● Mueller Furnace Co., L. J., Milwaukee.
Northwest Metal Products, Inc., Seattle, Wash.
● Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
● Olsen Manufacturing Co., C. A., Elyria, O.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
● Peerless Foundry Co., Indianapolis.
Penn Supply & Metal Corporation, Philadelphia.
Portland Stove Foundry Co., Portland, Me.
Reeves Steel & Mfg. Co., Dover, O.
Riggin Metal Products, Kankakee, Ill.
Schecter Brothers Co., Philadelphia.
Schoedinger, F. O., Columbus.
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Penn.
Sioux Steel Co., Sioux Falls, S. D.
Skinner Htg. & Vent. Co., Heater Div. of St. Louis Blow Pipe & Heater Co., Inc., St. Louis.
Southbridge Roofing Co., Inc., Southbridge, Mass.

● Advertisement in this issue. See Index to Advertisers, page 96-D.

Standard Furnace & Supply Co., Omaha, Nebr.
Stratton & Terstegge Co., Louisville, Ky.
• Superior Products Co., Omaha, Nebr.
• Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio.
Tri-State Heating Supply Inc., Fort Wayne, Ind.
• United States Register Co., Battle Creek, Mich.
• Waterman-Waterbury Co., Minneapolis.
Wheeling Corrugating Co., Wheeling, W. Va.
• Williams-Wallace Co., San Francisco, Calif.
• Williamson Heater Co., Cincinnati.

Smoke

Acer & Whedon, Inc., Medina, N. Y.
• Acme Manufacturing Company, Philadelphia.
Adelta Mfg. Co., Philadelphia, Penn.
• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Ballonoff Metal Products Co., Cleveland.
Berger Furnace Mfg. Co., Pittsburgh, Penn.
Bieler & Son, L., Long Island City, N. Y.
Biersach & Niedermeyer Co., Milwaukee.
Bovee Furnace Works, Waterloo, Ia. (Cast Iron)
Braden Mfg. Co., Terre Haute, Ind.
Champion Furnace Pipe Co., Peoria, Ill.
• Char-Gale Mfg. Co., Minneapolis.
Chicago Furnace Supply Co., Chicago.
Cincinnati Stamping & Furnace Co., Cincinnati.
• Clayton & Lambert Mfg. Co., Louisville, Ky.
• Condensation Engineering Corporation, Chicago.
Corbman Bros., Inc., Philadelphia.
Detroit Safety Furnace Pipe Co., Detroit.
• Eisbach, Albert N., Dubuque, Iowa.
Excelsior Steel Furnace Co., Chicago.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Green Colonial Furnace Co., Des Moines, Ia.
• Henry Furnace Co., Medina, Ohio.
Herbert & Sons, R.D., Nashville, Tenn.
Home Furnace Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
• Inland Steel Products Co., Milwaukee.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Keith Furnace Co., Des Moines, Ia.
• Krauser-Boyd, Inc., North Tonawanda, N. Y.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lennox Furnace Co., Marshalltown, Ia.
Lyon, Conklin & Co., Inc., Baltimore.
• Made-Rite Co., Inc., Newport, Ky.
• Majestic Co., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
• Meyer & Bro. Co., F., Peoria, Ill.
• Mueller Furnace Co., L. J., Milwaukee.
Northwest Metal Products, Inc., Seattle, Wash. (Black & galv.)
• Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
• Olsen Manufacturing Co., C. A., Elyria, Ohio.
• Peerless Foundry Co., Indianapolis, Ind.
Penn Supply & Metal Corporation, Philadelphia.
Portland Stove Foundry Co., Portland, Me.
Reeves Steel & Mfg. Co., Dover, O.
Riggin Metal Products, Kankakee, Ill.
Schecter Brothers Co., Philadelphia.
Schoedinger, F. O., Columbus, O.
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Standard Furnace & Supply Co., Omaha, Nebr.
• Stratton & Terstegge Co., Louisville, Ky.
• Superior Products Co., Omaha, Nebr.
• Thor Metal Products, Inc., Syracuse, N. Y.
Tri-State Heating Supply Inc., Fort Wayne, Ind.
• United States Register Co., Battle Creek, Mich.
• Waterman-Waterbury Co., Minneapolis.
Wheeling Corrugating Co., Wheeling, W. Va.
Wilder Manufacturing Co., Niles, O.
• Williams-Wallace Co., San Francisco, Calif.
• Williamson Heater Co., Cincinnati.
• Wise Furnace Co., Akron, O.

PIPE LOCK FORMERS

See Machines, Lock Forming

PIPE AND FITTINGS, GAS VENT AND FLUE

• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Autogas Company, Chicago.
Ballonoff Metal Products Co., Cleveland. (Chrome Plated)
Baltimore Porcelain Steel Corp., Baltimore, Md. (Porcelain enamel)
• Char-Gale Mfg. Co., Minneapolis. (Blue and Galvanized)
• Condensation Engineering Corp., Chicago. (Vitreous Enamel)
• Enderle, Inc., Ltd., Frank X, Los Angeles, Calif. (Galv. & asbestos)
Excelsior Steel Furnace Co., Chicago, Ill. (Galvanized)
Excelsior Stove & Mfg. Co., Quincy, Ill. (Blue & galv.)
• Henry Furnace Co., Medina, Ohio.
• Heremetal Company, Minneapolis.
Johns-Manville, New York, N. Y. (Asbestos & cement)
Laclede Steel Co., St. Louis. (Butt Weld—Wrought Steel)
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif. (Insulated aluminum & galv. steel)
Tri-State Heating Supply, Fort Wayne, Ind.
• Van-Packer Corporation, Chicago.
Wilder Manufacturing Co., Niles, O.
• Williams-Wallace Co., San Francisco, Calif.

PIPE AND FITTINGS, SHEET METAL

See Ducts and Duct Fittings, Prefabricated

PITTSBURGH LOCK FORMING MACHINES

See Machines, Pittsburgh Lock Forming

PLATES, METAL

Alloy

Allegheny Ludlum Steel Corporation, Pittsburgh. (Stainless)
Aluminum Co. of America, Pittsburgh.
American Brass Co., Waterbury, Conn. (Copper)
Armco Steel Corp., Middletown, Ohio. (Stainless steel)
• Bethlehem Steel Co. Bethlehem, Pa.
Bridgeport Brass Co., Bridgeport, Conn.
• Carnegie-Illinois Steel Corp., Pittsburgh.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper and its alloys)
Dow Chemical Company, Midland, Mich. (Magnesium)
Great Lakes Steel Corporation, Ecorse, Detroit.
Ingersoll Steel Div., Borg-Warner Corp., Chicago. (Stainless Clad)
Inland Steel Company, Chicago.
International Nickel Co., Inc., New York City. (Monel, Nickel, Inconel)
Jessop Steel Co., Washington, Penn. (Carbon, high speed)
• Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Lukens Steel Co., Coatesville, Penn. (Nickel, chromium, copper, manganese, molybdenum, alloys)
Monarch Alloys, Ravenna, Ohio.
• Republic Steel Corp., Cleveland.
• Revere Copper & Brass Incorporated, New York City. (Copper & copper base)
Reynolds Metals Company, Louisville, Ky. (Aluminum)
Universal-Cyclops Steel Corporation, Bridgeville, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.

Steel

Armco Steel Corp., Middletown, Ohio.
• Bethlehem Steel Co., Bethlehem, Pa.
• Carnegie-Illinois Steel Corp., Pittsburgh.
Columbia Steel Co., San Francisco.
Great Lakes Steel Corp., Ecorse, Detroit.
Ingersoll Steel Div., Borg-Warner Corp., Chicago. (Stainless Clad)
Inland Steel Co., Chicago.
International Steel Co., Evansville, Ind.
Jessop Steel Co., Washington, Pa.
Jones & Laughlin Steel Corp., Pittsburgh.
Lukens Steel Co., Coatesville, Pa.
• Republic Steel Corp., Cleveland.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Wood Steel Co., Alan, Conshohocken, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.

Wrought Iron

Byers Co., A. M., Pittsburgh.

POLISHERS

See Buffers, Grinders, Polishers and Sanders

PRECIPITATORS, ELECTROSTATIC

See Filters, Air, Electrostatic

PREFABRICATED DUCTS

See Ducts and Duct Fittings, Prefabricated

• Advertisement in this issue. See Index to Advertisers, page 98-D.

PRESSES AND DIES

Bath Co., Cyril, Cleveland.
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Toledo, Ohio.
Callahan Can Machine Co., Inc., Brooklyn.
Cincinnati Shaper Co., Cincinnati.
Clearing Machine Corp., Chicago. (Presses)
Cleveland Punch & Shear Works Co., Cleveland.
Cleveland Tramrail Div., Cleveland Crane & Eng. Co., Wickliffe, Ohio.
Davis & Son Machine Works, Los Angeles, Calif.
Diamond Machine Tool Co., Los Angeles, Calif.
Doelger & Kirsten, Inc., Milwaukee.
• Dreis & Krump Mfg. Co., Chicago.
Famco Machine Co., Racine, Wis. (Hand, Foot, Power)
Frederick Iron & Steel, Inc., Frederick, Md.
Henry & Wright Div. Hartford-Empire Co., Hartford, Conn.
Highland Engineering Co., Santa Monica, Calif.
Minster Machine Co., Minster, O.
Munton Mfg. Co., Franklin Park, Ill.
New Albany Machine Mfg. Co., New Albany, Ind.
• Niagara Machine & Tool Works, Buffalo.
Pacific Industrial Mfg. Co., Oakland, Calif.
Raar Manufacturing Co., Los Angeles.
Ran Corporation, Vernon Press Div., Richmond, Calif.
Swain Mfg. Co., Fred J., St. Louis.
Thomas Machine Mfg. Co., Pittsburgh, Penn.
• Thor Tool and Die Co., Oakland, Calif.
• Verson Allsteel Press Co., Chicago.
• Ward Machinery Co., Chicago.
Wilson, K. R., Buffalo.

PSYCHROMETERS, SLING AND HAND ASPIRATED

Foxboro Co., Foxboro, Mass.
Fries Instrument Div., Baltimore, Md.
G. M. Manufacturing Co., New York City.
General Scientific Equipment Co., Philadelphia.
Grinnell Co., Inc., Providence, R. I.
H-B Instrument Co., Philadelphia, Penn.
Hill & Co., E. Vernon, Chicago, Ill.
Johnson Service Co., Milwaukee.
Moeller Instrument Co., Richmond Hill, N. Y.
Palmer Thermometers, Inc., Norwood, Cincinnati.
Philadelphia Thermometer Co., Philadelphia, Penn.
Precision Thermometer & Instrument Co., Philadelphia.
Tagliabue Corp. (N. J.), C. J., Newark, N. J.
Taylor Instrument Companies, Rochester, N. Y.
Wekzler Thermometer Corp., New York City.
Weston Electrical Instrument Corp., Newark, N. J.

PULLEYS, FAN AND MOTOR

Allis-Chalmers Mfg. Co., Milwaukee.
American Pulley Co., Philadelphia.
Browning Mfg. Co., Inc., Maysville, Ky.
Chicago Die Casting Co., Chicago.
Congress Drives, Div. Tann Corp., Detroit.
Dayton Rubber Mfg. Co., Dayton, O.
Dick Co., Inc., R. & J., Passaic, N. J.
Dodge Mfg. Corp., Mishawaka, Ind.
Gates Rubber Co., Denver, Colo.
Goldens' Fdry. & Mach. Co., Columbus, Ga. (Cast Iron)
Heckethorn Mfg. & Supply Co., Littleton, Colorado.
Jones Fdry. & Mach. Co., W. A., Chicago.
• Lau Blower Co., Dayton, O.
Lovejoy Flexible Coupling Co., Chicago, Ill.
Maurey Mfg. Corp., Chicago.
Mitchell Company, Incorporated, John E., Dallas, Tex. (V-groove)
Pyott Fdry. & Mach. Co., Chicago.
Rockwood Mfg. Co., Inc., Indianapolis.
Scientific Tool Company, Dayton, O.
Spun Steel Div., Automatic Steel Products, Inc., Canton, Ohio.
Swift Mfg. Co., Inc., Hazel Park, Mich.
• Utility Appliance Corporation, Los Angeles.
Webster Electric Co., Racine, Wis.
Wood's Sons Co., T. B., Chambersburg, Pa.

PULLEYS, FURNACE CHAIN

• Hart & Cooley Mfg. Co., Holland, Mich.
• Mueller Furnace Co., L. J., Milwaukee.
• United States Register Co., Battle Creek, Mich.

PUMPS, FUEL OIL

• Automatic Products Company, Milwaukee.
Kraissl Co., Inc., Hackensack, N. J.
May Oil Burner Div., Gerotor May Corp., Baltimore.
• Polo Pump Co., Polo, Ill.
Ray Oil Burner Co., San Francisco, Calif. (Industrial)
Roper Corp., Geo. D., Rockford, Ill.
Sunstrand Machine Tool Co., Rockford, Ill.
Tuthill Pump Co., Chicago.
Viking Pump Company, Cedar Falls, Ia.
Wayne Home Equipment Co., Fort Wayne, Ind.
Webster Electric Co., Racine, Wis.
Worthington Pump & Machinery Corp., Harrison, N. J.

PUMPS, RECIRCULATING, FOR EVAPORATIVE COOLERS

Babbitz, Inc., New York City.
Beckett & Co., Thomas, Dallas, Texas.
Bell & Gossett Company, Morton Grove, Ill.
Jabsco Pump Co., Burbank, Calif.
• Little Giant Vaporizer Co., Oklahoma City, Okla.
Morey, Dan, Los Angeles.
Myers & Bro. Co., F. E., Ashland, O.
• National Engineering & Manufacturing Co., Kansas City, Mo.
Southern Air Conditioning Mfg. Co., Fort Worth, Texas.
Worthington Pump & Machinery Corp., Harrison, N. J.
Yeomans Bros. Co., Chicago, Ill.

PUNCHES AND SHEARS COMBINED, LEVER OPERATED

Berkroy Products, Inc., Burbank, Calif.
Bertsch & Co., Cambridge City, Ind.
• Buffalo Forge Co., Buffalo.
Cleveland Punch & Shear Works Co., Cleveland.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Heartley Machine & Tool Co., Toledo, O.
Hendley & Wittemore Co., Beloit, Wis.
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
National Machine Tool Co., Racine, Wis.
• Niagara Machine & Tool Works, Buffalo.
• Peck, Stow & Wilcox Co., Southington, Conn.
Rotex Punch Company, Oakland, Calif.
Weiss & Co., H., New York City.

PUNCHES, BENCH

Berkroy Products, Inc., Burbank, Calif.
• Buffalo Forge Co., Buffalo.
Champion Blower & Forge Co., Lancaster, Pa.
Heartley Machine & Tool Co., Toledo, O.
Hendley & Whittemore Co., Beloit, Wis.
Kidder Mfg. Co., J. F., Burlington, Vt.
• Maplewood Machinery Co., Chicago.
• Merchandising & Manufacturing Associates, Inc., Lancaster, Penn.
New Albany Machine Mfg. Co., New Albany, Ind.
• Niagara Machine & Tool Works, Buffalo.
• O'Neil-Irwin Mfg. Co., Lake City, Minn.
• Peck, Stow & Wilcox Co., Southington, Conn.
Rotex Punch Company, Oakland, Calif.
Weiss & Co., H., New York City.
• Whitney Mfg. Co., W. A., Rockford, Ill.
• Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia. (Turret)

PUNCHES, COMBINATION HAND AND BENCH

Champion Blower & Forge Co., Lancaster, Pa.
Heartley Machine & Tool Co., Toledo, O.
Hendley & Whittemore Co., Beloit, Wis.
• Niagara Machine & Tool Works, Buffalo.
• O'Neil-Irwin Mfg. Co., Lake City, Minn.
• Parker-Kalon Corp., New York City.
• Peck, Stow & Wilcox Co., Southington, Conn.
Rotex Punch Company, Oakland, Calif.
Weiss & Co., H., New York City.
• Whitney Mfg. Co., W. A., Rockford, Ill.
• Whitney Metal Tool Co., Rockford, Ill.

PUNCHES, HAND

Berkroy Products, Inc., Burbank, Calif.
Bertsch & Co., Cambridge City, Ind.
• Buffalo Forge Co., Buffalo.
Champion Blower & Forge Co., Lancaster, Pa.
Cleveland Punch & Shear Works Co., Cleveland.
• Crescent Tool Co., Jamestown, N. Y.
Damascus Steel Products Corporation, Rockford, Ill.
Davis & Son Machine Works, Los Angeles, Calif.
Excelsior Tool and Machine Co., East St. Louis, Ill.
Hendley & Whittemore Co., Beloit, Wis.
Ingels Elbow Machine Corporation, Chicago.
Kidder, Mfg. Co., J. F., Burlington, Vt.
• Maplewood Machinery Co., Chicago.
• Niagara Machine & Tool Works, Buffalo.
• Parker-Kalon Corp., New York City.
• Peck, Stow & Wilcox Co., Southington, Conn.
Penn Tool Co., Philadelphia.
• Reiner & Campbell Co., Inc., Elizabeth, N. J.
Rotex Punch Company, Oakland, Calif.
Snap-On Tools Corp., Kenosha, Wis.
Stanley Tools, New Britain, Conn.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

- Ward Machinery Co., Chicago, Ill.
  Weiss & Co., H., New York City.
- Whitney Mfg. Co., W. A., Rockford, Ill.
- Whitney Metal Tool Co., Rockford, Ill.
  Wiedemann Machine Co., Philadelphia. (Turret)

QUADRANTS, DAMPER

See Regulators

RECORDERS, HUMIDITY, PORTABLE

Bristol Co., Waterbury, Conn.
Brown Instrument Co., Div. of Minneapolis-Honeywell Reg. Co., Philadelphia.
Foxboro Co., Foxboro, Mass.
Fries Instrument Div., Baltimore, Md.
Leeds & Northrup Co., Philadelphia.
Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
- Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
  Palmer Thermometers, Inc., Cincinnati, Ohio.
  Taglialue Corp. (N. J.), C. J., Newark, N. J.
  Taylor Instrument Companies, Rochester, N. Y.
  Weksler Thermometer Corporation, New York City.

RECORDERS, TEMPERATURE, PORTABLE

- Bacharach Industrial Instrument Co., Pittsburgh.
  Bailey Meter Company, Cleveland.
  Bristol Co., Waterbury, Conn.
  Brown Instrument Co., Div. of Minneapolis-Honeywell Reg. Co., Philadelphia.
  Defender Instrument & Regulator Co., St. Louis.
  Dickson Company, Chicago.
  Foxboro Co., Foxboro, Mass.
  Fries Instrument Div., Baltimore, Md.
  Leeds & Northrup Co., Philadelphia.
  Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
- Minneapolis-Honeywell Regulator Co., Minneapolis.
  Moeller Instrument Co., Richmond Hill, N. Y.
  Palmer Thermometers, Inc., Cincinnati, Ohio.
  Preferred Utilities Mfg. Corp., New York City.
  Taglialue Corp. (N. J.), C. J., Newark, N. J.
  Taylor Instrument Companies, Rochester, N. Y.
  United States Gauge, Sellersville, Pa.
  Weksler Thermometer Corporation, New York City.

REFRACTORIES

Amerform Corporation, Philadelphia.
Babcock & Wilcox Co., New York City.
Bird Archer Co., Philadelphia.
Botfield Refractories Company, Philadelphia.
Chicago Fire Brick Co., Chicago.
Durex Co., Chicago.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Fireline Stove & Furnace Lining Co., Chicago. (For Hearths and Firepot Linings)
Green Fire Brick Co., A. P., Mexico, Mo. (All types fire clay)
Johns-Manville, New York City. (Cement and Monolithic)
Laclede-Christy Clay Products Co., St. Louis. (Fire Clay)
McLeod & Henry Co., Inc., Troy, N. Y. (Silicon Carbide)
- Monogram Products Co., Philadelphia, Penn.
  Munn and Steele, Inc., Newark, N. J.
  Pyrolite Products Co., Cleveland.
  Quigley Company, Inc., New York City. (Firebrick and Cements)
  Ramtite Co., Chicago. (Castable, Plastic)
  Rehm, R., St. Albans, N. Y. (Radiant)
  Refractory & Insulation Corp., New York City.
- Rex Clay Products, Detroit, Mich.
  Robinson Insulation Co., Great Falls, Mont. (Vermiculite)
  Rutland Fire Clay Co., Rutland, Vt. (Retort Cement)
  Standard Fuel Engineering Co., Detroit.
  U. S. Stoneware Company, Akron, Ohio.
  Walsh Refractories Corp., St. Louis.

REGALVANIZING EQUIPMENT AND MATERIALS

Galv-Weld Products, Dayton, O.

REGISTER SEALS

See Seals for Registers

REGISTER SHIELDS

See Shields, Warm Air Register

REFRIGERATING UNITS

See Compressors, Refrigerating

REGISTERS

Directional Flow

- A & A Register Co., Cleveland, Ohio.
- A-J Manufacturing Co., Kansas City, Mo.
- Air Control Products, Inc., Coopersville, Mich.
- Auer Register Co., Cleveland.
- Barber-Colman Co., Rockford, Ill.
  Berger Furnace Mfg. Co., Pittsburgh, Penn.
  Best Register Co., Milwaukee, Wis.
- Char-Gale Mfg. Co., Minneapolis.
  Controlair Manufacturing Co., Los Angeles.
  Diamond Manufacturing Co., Wyoming, Pa.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
  Harrison Sheet Steel Co., Chicago.
- Hart & Cooley Mfg. Co., Holland, Mich.
  Hastings Air Conditioning Co., Inc., Hastings, Nebr.
  Hendrick Mfg. Co., Carbondale, Pa.
- Independent Register Co., Cleveland.
  Krauser-Boyd, Inc., North Tonawanda, N. Y.
- Lima Register Co., Lima, Ohio.
  Midco Register Corporation, St. Paul.
  Register & Grille Mfg. Co., Inc., Brooklyn.
- Rock Island Register Co., Rock Island, Ill.
- Standard Stamping & Perforating Co., Chicago.
  Stewart Manufacturing Co., Bloomfield, N. J.
  Titus Manufacturing Corporation, Waterloo, Ia.
- Tuttle & Bailey, Inc., New Britain, Conn.
- United States Air Conditioning Corp., Minneapolis, Minn.
- United States Register Co., Battle Creek, Mich.
- Utility Appliance Corp., Los Angeles.
  Young Regulator Company, Cleveland.

Heating and Ventilating

- A & A Register Co., Cleveland, Ohio.
- Acme Manufacturing Co., Philadelphia, Penn.
- A-J Manufacturing Co., Kansas City, Mo. (Double Diffuser)
- Air Control Products, Inc., Coopersville, Mich.
  American Warming & Ventilating Co., Toledo, O.
- Auer Register Co., Cleveland.
- Barber-Colman Co., Rockford, Ill.
  Berger Furnace Mfg. Co., Pittsburgh, Penn.
  Best Register Co., Milwaukee.
- Brandes Co., Madison, Wis. (Baseboard)
  Brown Steel Tank Co., Minneapolis.
- Char-Gale Mfg. Company, Minneapolis.
  Controlair Manufacturing Co., Los Angeles.
  Diamond Mfg. Co., Wyoming, Pa.
- Dole Valve Company, Chicago, Ill.
- Empire Ventilation Equipment Co., Long Island City, N. Y.
- Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
- Harrington & King Perforating Co., Chicago, Ill.
  Harrison Sheet Steel Co., Chicago.
- Hart & Cooley Mfg. Co., Holland, Mich.
  Hendrick Mfg. Co., Carbondale, Pa.
- Independent Register Co., Cleveland.
  Krauser-Boyd, Inc., North Tonawanda, N. Y.
- Lima Register Co., Lima, Ohio.
  Midco Register Corporation, St. Paul, Minn.
- Minneapolis-Honeywell Regulator Co., Minneapolis.
- Mueller Furnace Co., L. J., Milwaukee.
  Register & Grille Mfg. Co., Inc., Brooklyn.
- Rock Island Register Co., Rock Island, Ill.
- Standard Stamping & Perforating Co., Chicago.
  Stewart Manufacturing Co., Bloomfield, N. J.
  Titus Manufacturing Corporation, Waterloo, Ia.
- Tuttle & Bailey, Inc., New Britain, Conn.
- United States Register Co., Battle Creek, Mich.

REGULATORS, DUCT DAMPER SETS

- Acme Manufacturing Co., Philadelphia, Penn.
- Adams Company, The, Dubuque, Ia.
- Air Control Products, Inc., Coopersville, Mich.
- Automatic Products Co., Milwaukee.
- Barber-Colman Company, Rockford, Ill.
- Cole-Sewell Engineering Co., St. Paul, Minn. (Damper locks)
  Controlair Manufacturing Co., Los Angeles.
  Fossum Mfg. Co., M. H., St. Paul, Minn.
- Gerett Corp., M. A., Milwaukee, Wis.
- Gosse Mfg. Co., Milwaukee, Wis.
- Hart & Cooley Mfg. Co., Holland, Mich.
  Kerentoff, G. L., Cincinnati.
  Martens & Stormoen, Boston.
- Mercoid Corporation, Chicago.
- Minneapolis-Honeywell Regulator Co., Minneapolis.
  Ohio Products Co., Cleveland.
- Parker-Kalon Corp., New York City.
- Perfex Corporation, Milwaukee.
  Sarcotherm Controls, Inc., New York City.
- United States Register Co., Battle Creek, Mich.
  Young Regulator Co., Cleveland.

REGULATORS, FURNACE DRAFT, MECHANICAL

- Barber-Colman Company, Rockford, Ill.
  Campbell Engineering Co., Appleton, Wis. (Electric)
  Defender Instrument & Regulator Co., St. Louis.
  Fulton Syphon Co., Knoxville, Tenn.

- Advertisement in this issue. See Index to Advertisers, page 93-D.

• Hart & Cooley Mfg. Co., Holland, Mich.
Hays Corp., Michigan City, Ind.
Hotstream Heater Co., Cleveland.
Little Janitor Furnace Clock Co., New York City.
No-No Specialty Co., Cleveland.
• Penn Electric Switch Co., Goshen, Ind.

RELAYS, ELECTRICAL

See Controls

REPAIRS, STOVE AND FURNACE

• Adams Company, The, Dubuque, Ia.
Associated Heating Supplies, Inc., Chicago, Ill.
Banner Repair Parts Co., Youngstown, O.
• Brauer Supply Co., A. G., St. Louis.
Central Furnace & Stove Repair Co., St. Louis.
Cincinnati Stamping & Furnace Co., Cincinnati.
Clark Co., Henry N., Boston.
• Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
Eselgroth & Co., Newark, N. J.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Faultless Heater Corp., Cleveland.
Foote Foundry Co., J. B., Fredericktown, O.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Kramer Bros. Foundry Co., Dayton, Ohio.
• Livingston, Inc., Marshall, Mich.
Metzner Stove Repair Co., Kansas City, Mo.
• Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
National Foundry & Furnace Co., Dayton, O.
• Northwestern Stove Repair Co., Chicago.
• Omaha Stove Repair Works, Omaha, Nebr.
• Peerless Foundry Co., Indianapolis, Ind.
Peninsular Stove Co., Detroit.
Pittsburgh Furnace Parts Co., Pittsburgh.
Portland Stove Foundry Co., Portland, Me.
• Pullen Stove & Furnace Repair Co., Geo. A., Denver, Colo.
Shamblen Furnace Parts Co., Pittsburgh.
Smith Furnace Co., New Castle, Pa.

RETINNING EQUIPMENT AND MATERIALS

Galv-Weld Products, Dayton, O.
Retinning Manufacturing Co., Chicago.

RIDGE ROLL, SHEET METAL

American Steel & Wire Co., Cleveland.
Barnes Metal Products Co., Chicago.
• Berger Bros. Co., Philadelphia.
Berger Mfg. Div. of Republic Steel Corp., Canton, O.
• Bethlehem Steel Co., Bethlehem, Pa. (Metal)
Biersach & Niedermeyer Co., Milwaukee.
• Carnegie-Illinois Steel Corporation, Pittsburgh.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Edwards Mfg. Co., Inc., Cincinnati.
• Hussey & Co., C. G., Pittsburgh. (Copper)
• Inland Steel Products Co., Milwaukee, Wis. (Galv. & copper)
• Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Klauer Mfg. Co., Dubuque, Ia.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lamb & Ritchie Co., Cambridge, Mass.
Lyon, Conklin & Co., Inc., Baltimore.
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Newport Rolling Mill Co., Newport, Ky.
Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
Plastool Products Co., Washington, Pa.
Reeves Steel & Mfg. Co., Dover, O.
Reynolds Metals Company, Louisville, Ky. (Aluminum)
Riggin Metal Products, Kankakee, Ill.
St. Paul Corrugating Co., St. Paul, Minn. (Galv. steel)
Schoedinger, F. O., Columbus, O.
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sioux Steel Co., Sioux City, S. D. (Galv. & copper)
Southbridge Roofing Co., Inc., Southbridge, Mass.
Southern States Iron Roofing Co., Savannah, Ga.
Souther Iron Co., E. E., St. Louis.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Tiffin Art Metal Co., Tiffin, Ohio. (Galv. copper, stainless steel, aluminum)
Van Noorden Co., E., Boston.
Wheeling Corrugating Co., Wheeling, W. Va.
• Williams-Wallace Co., San Francisco, Calif.

RIDGE VENTILATORS

See Ventilators, Roof

RIVETS

Alloy

• Bethlehem Steel Co., Bethlehem, Pa.
Cherry Rivet Co., Los Angeles, Calif. (Blind)
Clark Bros. Bolt Co., Millidale, Conn.
Cooper Co., Clark, Palmyra, N. J.
General Plate Div., Metals & Controls Corp., Attleboro, Mass. (Silver)
Hassall, Inc., John, Brooklyn.
Huck Manufacturing Company, Detroit. (Blind)
• Republic Steel Corp., Cleveland.
Townsend Co., New Brighton, Pa.
Tubular Rivet & Stud Co., Wollaston, Mass.

Aluminum

Aluminum Company of America, Pittsburgh.
Cherry Rivet Co., Los Angeles, Calif. (Blind)
Chicago Rivet & Machine Co., Bellwood, Ill.
du Pont de Nemours & Co., Inc. E. I., Wilmington, Del. (Explosive)
Goodrich Co., B. F., Akron, O. (Blind)
Hassall, Inc., John, Brooklyn.
Huck Manufacturing Co., Detroit. (Blind)
Reynolds Metals Company, Louisville, Ky.
Tubular Rivet & Stud Co., Wollaston, Mass.

Brass or Copper

Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Chicago Rivet & Machine Co., Bellwood, Ill.
Conklin Brass & Copper Co., Inc., T. E., New York City.
Cooper Co., Clark, Palmyra, N. J.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Explosive)
Goodrich Co., B. F., Akron, O. (Blind-Brass)
Harper Co., H. M., Morton Grove, Ill.
Hassall, Inc., John, Brooklyn.
Huck Manufacturing Co., Detroit. (Blind)
• Hussey & Co., C. G., Pittsburgh, Penn. (Copper)
Taunton & Company, Inc., John H., New York City.
Townsend Co., New Brighton, Pa.
Tubular Rivet & Stud Co., Wollaston, Mass.

Iron

Chicago Rivet & Mach. Co., Bellwood, Ill.
Cooper Co., Clark, Palmyra, N. J.
Hassall Inc., John, Brooklyn, N. Y.
Townsend Co., New Brighton, Penn.

Steel

• Bethlehem Steel Co., Bethlehem, Pa.
Chase Brass & Copper Co. Inc., Waterbury, Conn.
Cherry Rivet Co., Los Angeles, Calif. (Blind)
Chicago Rivet & Machine Co., Bellwood, Ill.
Clark Bros. Bolt Co., Millidale, Conn.
Cooper Co., Clark, Palmyra, N. J.
Goodrich Co., B. F., Akron, Ohio.
Hassall Inc., John, Brooklyn, N. Y.
Huck Manufacturing Co., Detroit. (Blind)
• Republic Steel Corporation, Cleveland.
Townsend Co., New Brighton, Pa.
Tubular Rivet & Stud Co., Wollaston, Mass.

ROD, WELDING

Air Reduction Sales Co., New York City.
American Agile Corp., Cleveland, Ohio.
American Brass Co., Waterbury, Conn.
American Steel & Wire Co., Cleveland.
Arcos Corp., Philadelphia, Penn. (Stainless steel)
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Crucible Steel Co. of America, New York, N. Y. (Stainless steel)
Dow Chemical Company, Midland, Mich. (Magnesium)
Eutectic Welding Alloys Corp., New York, N. Y.
Hobart Brothers Co., Troy, Ohio.
International Nickel Co., Inc., New York, N. Y. (Monel, Inconel)
Linde Air Products Co., New York, N. Y.
Marquette Mfg. Co., Inc., Minneapolis.
Modern Engineering Co., St. Louis.
National Cylinder Gas Co., Chicago.
Page Steel & Wire Div., Monessen, Pa. (Stainless Steel)
• Revere Copper & Brass Incorporated, New York City.
Sight Feed Generator Co., West Alexandria, Ohio.
Wall Chemicals Div., Liquid Carbonic Corp., Chicago.
Youngstown Sheet & Tube Co., Youngstown, O.

ROOF CEMENT

See Cement, Roof

ROOFING, BUILT-UP

See Felt, Roofing

• Advertisement in this issue. See Index to Advertisers, page 98-D.

ROOFING, SHEET METAL

Aluminum

Aluminum Company of America, Pittsburgh.
• Cheney Industries, Trenton, N. J. (Corrugated)
Fingles Co., Baltimore.
• Kaiser Aluminum & Chemical Corp., Oakland, Calif.
New Holland Metals Co., Lecia, Pa.
Overly Manufacturing Company, Greensburg, Pa.
Reynolds Metals Company, Louisville, Ky.
Southern States Iron Roofing Co., Savannah, Ga.
Tiffin Art Metal Co., Tiffin, Ohio.

Copper

American Brass Co., Waterbury, Conn.
Braden Mfg. Co., Terre Haute, Ind.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Conklin Brass & Copper Co., Inc., T. E., New York City.
Edwards Mfg. Co., Inc., Cincinnati.
Fingles Co., Baltimore, Md.
• Hussey & Co., C. G., Pittsburgh.
Klauer Manufacturing Co., Dubuque, Ia.
Overly Manufacturing Company, Greensburg, Pa.
Perkinson & Brown, Chicago.
• Revere Copper & Brass Incorporated, New York City.

Lead

Alpha Metals, Inc., Brooklyn.
Federated Metals Div. American Smelting & Refining Co., New York, N. Y.
Flemm Lead Co., Inc., Long Island City, N. Y.
Illinois Zinc Co., Chicago.
Kirk & Son, Morris P., Los Angeles (copper, galv. iron)
Ledkote Products Co., Long Island City, N. Y.
National Lead Co., New York City.
Northwest Lead Company, Seattle, Wash.
Standard Rolling Mills, Inc., Brooklyn.

Monel

Fingles Co., Baltimore, Md.
International Nickel Co., Inc., New York, N. Y.

Steel, Galvanized

• Airtherm Manufacturing Co., St. Louis. (Decking)
• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
American Steel Band Co., Pittsburgh.
American Steel & Wire Co., Cleveland.
Apollo Steel Company, Apollo, Pa.
Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, O.
• Bethlehem Steel Co., Bethlehem, Pa.
Braden Mfg. Co., Terre Haute, Ind.
• Carnegie-Illinois Steel Corp., Pittsburgh.
• Cheney Industries, Trenton, N. J. (Corrugated)
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco.
• Continental Steel Corp., Kokomo, Ind.
Detroit Steel Products Co., Detroit.
Edwards Manufacturing Co., Inc., Cincinnati.
Globe Iron Roofing & Corrugating Co., Newport, Ky.
Goldsmith Metal Lath Co., Cincinnati, Ohio.
Granite City Steel Co., Granite City, Ill. (Corrugated)
Inland Steel Company, Chicago.
• Inland Steel Products Co., Milwaukee.
International Steel Company, Evansville, Ind.
Klauer Manufacturing Co., Dubuque, Ia.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lyon, Conklin & Co., Inc., Baltimore.
New Delphos Manufacturing Co., Delphos, O.
Overly Manufacturing Co., Greensburg, Pa.
Perkinson & Brown, Chicago.
Plasteel Products Co., Washington, Pa. (Protected)
Reeves Steel & Mfg. Co., Dover, O.
Robertson Co., H. H., Pittsburgh. (Protected)
Sioux Steel Co., Sioux Falls, S. D.
St. Paul Corrugating Co., St. Paul, Minn.
Souther Iron Co., E. E., St. Louis.
Southern States Iron Roofing Co., Savannah, Ga.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Tiffin Art Metal Co., Tiffin, Ohio.
Truscon Steel Co., Youngstown, Ohio. (Plain steel)
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corporation, Wheeling, W. Va.

Steel, Protective Coated

American Steel Band Co., Pittsburgh, Penn.
• Airtherm Mfg. Co., St. Louis, Mo.
Cheney Industries, Trenton, N. J.

Steel, Terne Plate

• Ajax Furnace Fitting Co. Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Berger Mfg. Div. of Republic Steel Corp., Canton, O.
• Bethlehem Steel Co., Bethlehem, Pa.
• Carnegie-Illinois Steel Corp., Pittsburgh.
Edwards Manufacturing Co., Inc., Cincinnati, Ohio.
Fingles Co., Baltimore, Md.
• Follansbee Steel Corporation, Pittsburgh.
• Inland Steel Products Co., Milwaukee.
Klauer Manufacturing Co., Dubuque, Ia.
Lyon-Conklin & Co., Inc., Baltimore.
New Delphos Manufacturing Co., Delphos, O.
Sioux Steel Co., Sioux Falls, S. D.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Metal & Mfg. Co., Moundsville, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, O.

Steel, Tin Plate

• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Berger Mfg. Div. of Republic Steel Corp., Canton, O.
• Carnegie-Illinois Steel Corp., Pittsburgh.
• Inland Steel Products Co., Milwaukee.
Klauer Manufacturing Co., Dubuque, Ia.
Lyon, Conklin & Co., Inc., Baltimore.
Perkinson & Brown, Chicago.
Sioux Steel Co., Sioux Falls, S. D.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.

Zinc

Barnes Metal Products Co., Chicago.
Edwards Mfg. Co., Inc., Cincinnati.
Illinois Zinc Co., Chicago.
Matthiessen & Hegeler Zinc Co., La Salle, Ill.
New Jersey Zinc Co., New York City.
Potts-Farrington Co., Philadelphia.

ROOFING, SLATE

North Bangor Slate Co., Bangor, Pa.
Perkinson & Brown, Chicago.
Sheldon Slate Products Co., Inc., Middle Granville, N. Y.
Structural Slate Co., Pen Argyl, Pa.
Vendor Slate Co., Inc., Nazareth, Pa.
Vermont Structural Slate Co., Inc., Fair Haven, Vt.

ROOFING, TILE (CLAY AND CONCRETE)

Hood Co., B. Mifflin, Daisy, Tenn. (Clay)
Ludowici-Celadon Co., Chicago.
Perkinson & Brown, Chicago.
Truscon Laboratories, Detroit.
United States Gypsum Co., Chicago, Ill. (Gypsum)

ROOF TRIM (MOULDINGS), STEEL, EAVES AND RAKES

Appleton Supply Co., Inc., Appleton, Wis. (Starter strip)
• Inland Steel Products Co., Milwaukee, Wis. (Eaves)
Northwest Metal Products, Inc., Seattle, Wash.
• Obdyke, Inc., B. P., Philadelphia, Penn.
Penn Supply & Metal Corp., Philadelphia.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Sioux Steel Co., Sioux Falls, S. D.
Wheeling Steel Corporation, Wheeling, W. Va.

RULES, SLIDE, HEATING

• Calculator Specialty Co., Chicago, Ill.
• Climatemaker Slide Rule Service, Co., Bloomington, Ill.
Jackson Co., Thomas M., Detroit, Mich.
Perry Graf Corp., Maywood, Ill.

RUST PROTECTION FOR METALS

See Chemicals, Rust Preventive

SANDERS

See Buffers, Grinders, Polishers and Sanders

SAVERS, HEAT

Cary Mfg. Co., Waupaca, Wis.
Condensation Engineering Corp., Chicago.
Elmwood Manufacturing Co., Detroit.
Gerhardt, W. F., Richmond, Va. (oil or gas).
Heatriever Div., Crane Equipment & Supply Co., Waterbury, Conn.

SCREENS, SUN REFLECTING

Ingersoll Steel Div., Borg-Warner Corp., Chicago.
• Kaiser Aluminum & Chemical Corp., Oakland, Calif.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

SCREWS, SHEET METAL

Aluminum Co. of America, Pittsburgh. (Aluminum)
American Screw Co., Providence, R. I.
Continental Screw Co. New Bedford, Mass.
Elco Tool & Screw Corporation, Rockford, Ill.
Independent Nail & Packing Co., Bridgewater, Mass.
Industrial Screw Co., Chicago.
• National Lock Co., Inc., Rockford, Ill.
• Parker-Kalon Corp., New York City.
Pheoll Manufacturing Co., Chicago.
Rockford Screw Products Co., Rockford, Ill.
Shakeproof, Inc., Chicago.
• United States Register Co., Battle Creek, Mich.

SEALS FOR REGISTERS

Excel Heating & Air Conditioning Co., Chicago.

SEAMER MACHINES

See Machines, Seaming

SETTING DOWN MACHINES

See Machines, Setting Down

SHEARS AND PUNCHES COMBINED

See Punches and Shears Combined

SHEARS, HAND AND BENCH

See Snips and Shears, Bench and Hand

SHEETS, METAL

Aluminum

Aluminum Company of America, Pittsburgh.
American Nickeloid Company, Peru, Ill.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Fairmont Aluminum Co., Fairmont, W. Va.
• Kaiser Aluminum & Chemical Corp., Oakland, Calif.
New Holland Metals Co., Leola, Pa.
• Philadelphia Rust Proof Co., Philadelphia, Penn.
Reynolds Metals Company, Louisville, Ky. (Corrugated)

Clad

Allegheny Ludlum Steel Corporation, Pittsburgh. (Stainless)
Aluminum Company of America, Pittsburgh.
American Nickeloid Company, Peru, Ill. (Nickel, Chromium, Brass, Copper)
General Plate, Div. Metals & Controls Corp., Attleboro, Mass.
Ingersoll Steel Div. Borg-Warner Corp., Chicago.
Jessop Steel Co., Washington, Pa. (Stainless)
• Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Lukens Steel Co., Coatesville, Penn. (Nickel, Monel, Inconel & stainless steel)
Wood Steel Co., Alan, Conshohocken, Penn. (Stainless steel)

Copper

American Brass Co., Waterbury, Conn.
American Nickeloid Co., Peru, Ill.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Conklin Brass & Copper Co., Inc., T. E., New York City.
• Hussey & Co., C. G., Pittsburgh.
• Revere Copper & Brass Incorporated, New York City.
Weirton Steel Co., Weirton, W. V. (Electrolitic Zinc Coated)
Western Brass Mills Div. Olin Industries, Inc., East Alton, Ill.

Copper, Lead Coated

American Brass Co., Waterbury, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
• Hussey & Co., C. G., Pittsburgh.
Lamb & Ritchie Co., Cambridge, Mass.
Ledcote Products Co., Long Island City, N. Y.
• Revere Copper & Brass Incorporated, New York City.

Lead

Alpha Metals, Inc., Brooklyn.
Belmont Smelting & Refining Works, Inc., Brooklyn.
Division Lead Co., Chicago, Ill.
Eagle-Picher Co., Cincinnati.
Federated Metals Div., American Smelting and Refining Co., New York City.
Flemm Lead Co., Inc., Long Island City, N. Y.
Glaser Lead Co., Inc., Brooklyn.
Illinois Zinc Co., Chicago.
Kirk & Son, Morris, P., Los Angeles.
National Lead Co., New York City.
Northwest Lead Company, Seattle, Wash.
Standard Rolling Mills, Inc., Brooklyn.
Weirton Steel Co., Weirton, W. Va. (Alloy Coated)

Steel, Black

• Bethlehem Steel Co., Bethlehem, Penn.
• Continental Steel Corp., Kokomo, Ind.
• Follansbee Steel Corp., Pittsburgh, Penn.
Jones & Laughlin Steel Corp., Pittsburgh, Penn.
Niles Rolling Mill Co., Niles, Ohio.
Wheeling Steel Corp., Wheeling, W. Va.
Wood Steel Co., Alan, Conshohocken, Penn.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Blue, Polished

• Follansbee Steel Corp., Pittsburgh, Penn.
Granite City Steel Co., Granite City, Ill.

Steel, Copper Bearing

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, O.
• Bethlehem Steel Co., Bethlehem, Pa.
• Carnegie-Illinois Steel Corp., Pittsburgh.
Columbia Steel Co., San Francisco.
• Continental Steel Corp., Kokomo, Ind.
• Follansbee Steel Corporation, Pittsburgh.
Granite City Steel Co., Granite City, Ill.
Inland Steel Co., Chicago. (Copper Alloy, Zinc Alloy)
Jones & Laughlin Steel Corp., Pittsburgh.
Newport Rolling Mill Co., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Reeves Steel & Mfg. Co., Dover, O.
• Republic Steel Corp., Cleveland.
Sharon Steel Co., Sharon, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, O.

Steel, Corrugated

Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio. (Galvanized)
Carnegie-Illinois Steel Corp., Pittsburgh, Penn. (Black & galvanized)
Jones & Laughlin Steel Corp., Pittsburgh, Penn. (Black)
Niles Rolling Mill Co., Niles, Ohio.
Weirton Steel Co., Weirton, W. Va. (Galv.)

Steel, Galvanized

American Steel & Wire Co., Cleveland, Ohio.
Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
• Carnegie-Illinois Steel Corp., Pittsburgh, Penn.
• Continental Steel Corp., Kokomo, Ind.
Niles Rolling Mill Co., Niles, Ohio.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.

Steel, Galvannealed

Berger Mfg. Div. of Republic Steel Corp., Canton, O.
• Bethlehem Steel Co., Bethlehem, Penn.
• Carnegie-Illinois Steel Corp., Pittsburgh.
• Continental Steel Corp., Kokomo, Ind.
Newport Rolling Mill Co., Andrews Steel Co., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
• Republic Steel Corp., Cleveland.
Sharon Steel Corp., Sharon, Pa.

Steel, Protective Coated

American Steel Band Co., Pittsburgh, Penn.
Armco Steel Corp., Middletown, Ohio. (Aluminized)
Koppers Co., Inc., Tar Products Div., Pittsburgh, Penn.
Plasteel Products Co., Washington, Penn.

• Advertisement in this issue. See Index to Advertisers, page 88-D.

Steel, Stainless

Allegheny Ludlum Steel Corporation, Pittsburgh.
Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
• Carnegie-Illinois Steel Corp., Pittsburgh.
Crucible Steel Co., of America, New York, N. Y.
Duriron Co., Inc., Dayton, Ohio.
Eastern Stainless Steel Corp., Baltimore, Md.
Ingersoll Steel Div., Borg-Warner Corp., Chicago.
Jessop Steel Co., Washington, Pa.
• Republic Steel Corp., Cleveland.
Sharon Steel Corp., Sharon, Pa.
Superior Steel Corp., Pittsburgh.
Tennessee Coal, Iron and Railroad Co., Birmingham, Ala.
Universal-Cyclops Steel Corp., Bridgeville, Pa.
Washington Steel Corporation, Washington, Pa.

Steel, Terne Plate

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
• Carnegie-Illinois Steel Corp., Pittsburgh, Penn.
• Follansbee Steel Corp., Pittsburgh, Penn.
Niles Rolling Mill Co., Niles, Ohio.
Weirton Steel Co., Weirton, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Tin Plate

Berger Mfg. Div., Republic Steel Corp., Canton, O.
• Bethlehem Steel Co., Bethlehem, Pa.
• Carnegie-Illinois Steel Corp., Pittsburgh.
Granite City Steel Co., Granite City, Ill.
Inland Steel Co., Chicago.
Jones & Laughlin Steel Corp, Pittsburgh.
Lyon, Conklin & Co., Inc., Baltimore.
• Republic Steel Corp., Cleveland.
Sharon Steel Corp., Sharon, Pa.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Steel Corp., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, O.

Zinc

American Nickeloid Co., Peru, Ill.
Belmont Smelting & Refining Works, Inc., Brooklyn.
Downs-Smith Brass & Copper Co., Inc., New York City.
Hegeler Zinc Co., Danville, Ill.
Illinois Zinc Co., Chicago.
Matthiessen & Hegeler Zinc Co., La Salle, Ill.
New Jersey Zinc Co., New York City.
Potts-Farrington Co., Philadelphia.

SHEETS, NON-METALLIC

Acme Asbestos Covering and Flooring Co., Chicago (Asbestos cement).
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos cement)
Celotex Corporation, Chicago.
Johns-Manville, New York, N. Y. (Asbestos cement)
Keasbey & Mattison Company, Ambler, Penn. (Asbestos)
Keystone Asphalt Products Co., Chicago.
Masonite Corporation, Chicago.
Norristown Magnesia & Asbestos Co., Norristown, Penn. (Asbestos)
Ruberoid Co., New York, N. Y. (Asbestos cement: flat & corrugated)
Ball Mountain Co., Chicago.
• Wilson, Inc., Grant, Chicago.

SHEETS, SPECIAL METAL

(Nickel Zinc, Chrome Zinc, Nickel Coated Copper, Chromium Coated Copper, Nickel Coated Steel, Chromium Coated Steel, Chromium Coated Nickel Silver, Zinc Brass, Zinc Copper, etc.)

Allan Corp., Trenton, N. J. (Zinc, copper, & magnesium alloy)
American Brass Co., Waterbury, Conn. (Copper-Silicon Alloys)
American Nickeloid Co., Peru, Ill. (Zinc, chromium, brass, and copper plated zinc)
Apollo Metal Works, Chicago. (Plated—Nickel Zinc, Nickel Copper, Chrome Copper, Chrome Steel, Nickel Steel, Zinc Steel, Chrome Brass)
Apollo Steel Co., Apollo, Pa.
• Bethlehem Steel Co., Bethlehem, Pa. (Nickel—Chromium)
Dow Chemical Company, Midland, Mich.
Ingersoll Steel Div., Borg-Warner Corp., Chicago.
International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
Lukens Steel Co., Coatesville, Penn. (Monel & Inconel)
Lyon, Conklin & Co., Inc., Baltimore.
Maysteel Products, Inc., Milwaukee.
National Sheet Metal Co., Peru, Ill. (Electro-Plated)
Reeves Steel & Manufacturing Co., Dover, O.
• Republic Steel Corp., Cleveland.
• Revere Copper & Brass Inc., New York, N. Y. (Copper alloys)
Robertson Co., H. H., Pittsburgh. (Protected)
Western Brass Mills Div. Olin Industries, Inc., East Alton, Ill. (Brass, bronze, phosphor bronze)

SHIELDS, WARM AIR REGISTER

Gammeter Co., W. F., Cadiz, O. (With Humidifier).
Kauffman Air Conditioning Corp., St. Louis.
Patent Novelty Company, Fulton, Ill. (With humidifier).
Savage Co., W. J., Knoxville, Tenn.

SHINGLES AND TILE, METAL

• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Berger Mfg. Div., Republic Steel Corp., Canton, Ohio. (Galvanized)
Edwards Manufacturing Co., Inc., Cincinnati, Ohio. (Galv. steel, tin, zinc, aluminum & copper)
Fingles Co., Baltimore, Md.
Globe Iron Roofing & Corrugating Co., Newport, Ky. (galvanized and painted terne).
• Miller & Doing, Brooklyn.
Reynolds Metals Company, Louisville, Ky. (Aluminum)
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y. (Galv. & copper)
Southern States Iron Roofing Co., Savannah, Ga. (steel and aluminum)
Wheeling Corrugating Co., Wheeling, W. Va. (steel shingles).
• Williams-Wallace Co., San Francisco, (Painted tin and galv.)

SHUTTERS

See Louvers and Shutters

SKYLIGHT LIFTS

See Lifts, Skylight

SKYLIGHTS

• Acme Manufacturing Company, Philadelphia.
• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Biersach & Niedermeyer Co., Milwaukee.
Danner Metal Works Co., Hagerstown, Md.
Edwards Mfg. Co., Inc., Cincinnati.
Fingles Co., Baltimore, Md.
Gehri Company, Tacoma, Wash.
General Sheet Metal Works, Inc., Bridgeport, Conn. (Puttyless).
Herbert & Sons, R. D., Nashville, Tenn.
Hirschman-Pohle Co., Inc., LeRoy, N. Y. (Puttyless).
LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Lee & Son Co., Thomas, Cincinnati. (Ventilating, non-ventilating)
Mosechi-Edwards Corrugating Co., Inc., Cincinnati.
Overly Manufacturing Co., Greensburg, Pa.
Pennsylvania Wire Glass Co., Philadelphia, Penn.
Perkinson & Brown, Chicago.
Richards, J. Merrill, Boston. (Glass Block)
Riester & Theamacher Co., Cleveland.
Riggin Metal Products, Kankakee, Ill.
Robertson Co., H. H., Pittsburgh. (Structural)
St. Paul Corrugating Co., St. Paul, Minn.
Schoedinger, F. G., Columbus, O.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Souther Iron Co., E. E., St. Louis.
Steinhorst & Sons, Inc., Emil, Utica, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio.
Vallas, Lionel, Chicago.
Van Noorden Co., E., Boston.
Vent-O-Lite Co., Chicago. (Industrial, Ventilating, Puttyless)
• Willis Steel Corporation, Galesburg, Ill. (Sheet Metal)
York Corrugating Co., York, Pa.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

SLITTING MACHINES

See Machines, Slitting

SMOKE PIPE

See Pipe, Smoke

SNIPS AND SHEARS, BENCH AND HAND

Bartlett Mfg. Co., Detroit.
Bergman Tool Mfg. Co., Inc., Buffalo, N. Y. (Bench)
Berridge Shear Co., Sturgis, Mich. (hand)
• Beverly Shear Co., Chicago.
Bremil Mfg. Co., Erie, Pa. (Shears)
Compton Shear Co., W. H., Newark, N. J.
• Crescent Tool Co., Jamestown, N. Y.
Henkel-Clauss Co., Fremont, Ohio. (Hand)
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
Kleek's Aviation Snips, Wilmington, Del.
Lincoln Machine Co., Boston, Mass.
• Merchandising & Manufacturing Associates, Inc., Lancaster, Penn.
• Niagara Machine & Tool Works, Buffalo, N. Y. (Straight, circle, combination & double cutting)
• O'Neil-Irwin Manufacturing Co., Lake City, Minn.
• Peck, Stow & Wilcox Co., Southington, Conn.
Penn Tool Company, Philadelphia.
Roto-Table Co., Dayton, Ohio. (Double cutting, notching, nibbling & dovetailing)
Snap-On Tools Corporation, Kenosha, Wis.
Viking Shear Co., Erie, Pa. (Shears)
• Whitney Mfg. Co., W. A., Rockford, Ill.
• Wiss & Sons Co., J., Newark, N. J.

SNOW GUARDS

See Guards, Snow

SOLDER

• Allen Co., Inc., L. B., Chicago, Ill. (Acid, rosin core; bar, wire, powder; stainless steel)
Alpha Metals, Inc., Brooklyn. (Silver & Tin-Lead)
American Brass Co., Waterbury, Conn.
American Products Corporation, Chicago, Ill. (Kits, silver)
American Solder & Flux Co., Philadelphia (paste).
Belmont Smelting & Refining Works, Inc., Brooklyn (all kinds).
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Conklin Brass & Copper Co., Inc., T. E., New York City.
Division Lead Co., Chicago, Ill.
Downs-Smith Brass & Copper Co., New York City.
Eagle-Picher Co., Cincinnati (Bar and Wire).
Empire Metal Co., Syracuse, N. Y.
Eutectic Welding Alloys Corp., New York, N. Y.
Farrelloy Co., Philadelphia, Penn.
Federated Metals Div. American Smelting & Refining Co., New York, N. Y.
Fiemm Lead Co., Inc., Long Island City.
Fusion Engineering, Cleveland.
Galv-Weld Products, Dayton, O. (Repair)
Glaser Lead Co., Inc., Brooklyn.
Handy & Harman, New York City (silver).
Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
Kester Solder Co., Chicago, Ill. (Bar, cored, self-fluxing, wire)
Kirk & Son, Morris P., Los Angeles.
Klauer Mfg. Co., Dubuque, Ia.
Lenk Mfg. Company, Boston. (Rosin Core, Acid Core, Wire, Aluminum)
Lukens Metal Co., Thos. F., Philadelphia.
National Lead Co., New York City.
Northwest Lead Company, Seattle, Wash.
• Ruby Chemical Co., Columbus, O. (Acid and Rosin Core).
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sherman & Co., Flushing, N. Y. (Silver solder)
Standard Rolling Mills, Inc., Brooklyn.
Technical Processes Division, Colonial Alloys Company, Philadelphia. (Aluminum)
United Wire & Supply Corp., Providence, R. I.

SOLDERING COPPERS

See Coppers, Soldering

SOLDERING FLUX

See Flux, Soldering

SOLDERING FURNACES

See Furnaces, Soldering

SOLDERING TORCHES

See Torches, Soldering

SOLENOID VALVES

See Controls

SOOT REMOVER

Ampion Corporation, Long Island City, N. Y.
• Clean Sweep Co., South Lansing, Mich.
Coughlan Co., G. N., West Orange, N. J.
Healy-Ruff Co., St. Paul, Minn.
Hercules Chemical Co., Inc., New York City.
Marine Electrolysis Eliminator Co., Seattle.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
North American Fibre Products Co., Cleveland.
Red Wing Oil Burner Co., Inc., Chelsea, Mass.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Tamms Industries Inc., Chicago, Ill.

SPOT WELDERS

See Welders, Spot

SPRAY GUNS

See Guns, Spray

STAMPINGS, METAL

Ackermann Manufacturing Company, Wheeling, W. Va.
• Acme Manufacturing Co., Philadelphia, Penn.
Ames Co., W. R., San Francisco.
Berger Furnace Mfg. Co., Pittsburgh, Penn.
Bossert Company, Inc., Utica, N. Y.
Burgess-Norton Mfg. Co., Geneva, Ill.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
• Chicago Metal Mfg. Co., Chicago, Ill. (Rings)
Commercial Shearing & Stamping Co., Youngstown, O.
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Dayton Rogers Mfg. Co., Minneapolis.
Detroit Stamping Co., Detroit.
Downs-Smith Brass & Copper Co., Inc., New York City.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Friedley-Voshardt Co., Chicago.
Globe Machine & Stamping Co., Cleveland.
H P L Manufacturing Co., Cleveland.
Hupp Corporation, Globe Stamping Div., Cleveland.
Ideal Products Co., Oshkosh, Wis.
• Kirk & Blum Mfg. Co., Cincinnati.
Ledcote Products Co., Long Island City, N. Y.
Lukens Steel Company, Coatesville, Pa.
Maysteel Products, Inc., Milwaukee.
Mechanical Products Company, Seattle, Wash.
• Miller & Doing, Brooklyn.
• Morrison Products Inc., Cleveland, Ohio.
• Morrison Steel Products, Inc., Buffalo, N. Y.
Moss Industries, Inc., Brooklyn.
• National Metal Fabricators, Chicago.
New Delphos Manufacturing Co., Delphos, O.
New Monarch Machine & Stamping Co., Des Moines, Ia.
Northwest Metal Products, Inc., Seattle, Wash.
Paine Company, Chicago.
• Revere Copper & Brass Incorporated, New York, N. Y. (Copper & copper alloy)
Small Lot Stamping Co., Linden, N. J.
Standard Pressed Steel Co., Jenkintown, Penn.
• Standard Stamping & Perforating Co., Chicago.
Tannewitz Works, Grand Rapids, Mich.
Truscon Steel Co., Youngstown, O.
• United States Register Co., Battle Creek, Mich.
Western Brass Mills Div. Olin Industries, Inc., East Alton, Ill.
Worcester Pressed Steel Co., Worcester, Mass.
York Corrugating Co., York, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.
Ziegler-Harris Co., Burbank, Calif.

STAMPINGS, STEEL FURNACE

Ackermann Manufacturing Company, Wheeling, W. Va.
Commercial Shearing & Stamping Co., Youngstown, Ohio. (Heads for furnace domes & crescent radiators)
Mohawk Metal Products Co., Frankfort, N. Y. (furnace shells and radiators).

STERILIZERS, AIR

See Lamps, Germicidal; Blower-Filter Units Equipped With Germicidal Apparatus

STOKER CONTROLS

See Controls; Control Systems

STOKERS

Domestic (Up to 61 lb per hour)

• Airtemp Div., Chrysler Corp., Dayton, Ohio. (Anthracite, bituminous)
Allen Stoker Co., Allentown, Pa. (anthracite)
• American Furnace Co., St. Louis.

• Advertisement in this issue. See Index to Advertisers, page 92-D.

Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
• Automatic Firing Corporation, St. Louis, Mo.
Beckley Perforating Co., Garwood, N. J. (Anthracite).
Black Diamond Stoker Co., Sioux City, Ia.
Bovee Furnace Works, Waterloo, Ia.
Canton Stoker Corp., Canton, O.
Carpenter Heating & Stoker Company, Cleveland.
Catskill Metal Works, Inc., Catskill, N. Y. (Anthracite)
Central Rubber & Steel Corp., Findlay, O.
• Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc., Lafayette, Ind.
Cooper & Cooper, Inc., Pittsfield, Mass. (Anthracite).
• Cotta Transmission Co., Rockford, Ill.
Crane Company, Chicago.
• Delco Appliance Div., General Motors Corp., Rochester, N. Y. (Bituminous.)
• Des Moines Furnace & Stove Repair Co., Des Moines, Iowa.
Diamond Iron Works, Inc., Minneapolis.
Eddy Stoker Corp., Chicago.
Electric Furnace-Man, Inc., Emmaus, Pa. (Anthracite).
Excelsior Stove & Mfg. Co., Quincy, Ill.
Fairbanks, Morse & Co., Chicago, Ill.
Frederick Iron & Steel, Inc., Frederick, Md. (Bituminous)
Freed Heater & Stoker Company, Philadelphia. (Anthracite).
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
Fuel Savers, Inc., Harrisburg, Pa.
Gehl Bros. Mfg. Co., West Bend, Wis.
General Machine Co., Inc., Emmaus, Pa. (Anthracite).
Gross-Aire Mfg. Co., St. Louis, Mo.
• Hall-Neal Furnace Co., Indianapolis, Ind.
Heatcraft Company, Louisville, Ky.
Heating Assurance, Inc., Spokane, Wash.
Hemp & Co., Inc., Macomb, Ill.
Hershey Machine & Foundry Co., Manheim, Penn.
• Hess Co., Chicago, Ill.
• Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Ind.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Illinois Iron & Bolt Co., Chicago.
Iron Fireman Mfg. Co., Cleveland.
Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.
Keith Furnace Co., Des Moines, Ia.
Kingston Products Corporation, Tipton, Ind.
Kol-Master Corp., Oregon, Ill.
Leas Co., H. Leslie, Monona, Ia.
• Meyer Furnace Co., Peoria, Ill.
Muncie Gear Works, Inc., Muncie, Ind.
National Steam Pump Co., Upper Sandusky, O.
National Stoker Co., Inc., St. Louis. (Bituminous)
Nelson Bros. & Strom Co., Racine, Wis. (Bituminous)
Northern Steel & Stoker Corp., Peoria, Ill.
Plymouth Industries, Inc., Plymouth, Ind.
Pocahontas Fuel Co., Inc., Stoker Div., Cleveland.
Premium Coal & Oil Co., Cincinnati, Ohio.
Rheem Manufacturing Company, New York City.
• Schwab Furnace Co., Milwaukee, Wis.
Schwab Safe Co., Lafayette, Ind.
Scott-Newcomb, Inc., St. Louis.
Smith Corporation, A. O., Milwaukee.
Souther Iron Co., E. E., St. Louis.
Steel Products Engineering Co., Springfield, O.
Stewart-Rogers, Inc., Philadelphia (Anthracite).
Stoker-Lad Co., Tacoma, Wash.
Stoker-Ola Mfg. Co., Peoria, Ill.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sun-Fire Stoker Corp., New Albany, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tropic-Air Stoker Co., Canton, O.
U. S. Machine Corporation, Lebanon, Ind.
Whiting Fire Power Products Corp., Superior, Wis.
Will-Burt Co., Orrville, O.

Industrial and Commercial (61 lb to 300 lb per hour)

• Airtemp Div. Chrysler Corp., Dayton, Ohio.
American Coal Burner Co., Chicago, Ill.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
• Automatic Firing Corporation, St. Louis, Mo.
Black Diamond Stoker Co., Sioux City, Ia.
Bros Boiler & Mfg. Co., Wm., Minneapolis.
Brownell Co., Dayton, O.
Canton Stoker Corp., Canton, O.
Carpenter Heating & Stoker Company, Cleveland.
Catskill Metal Works, Inc., Catskill, N. Y. (Anthracite).
Central Rubber & Steel Corp., Findlay, O.
Chicago Automatic Stoker Co., Inc., Chicago.
Combustion Engineering-Superheater, Inc., New York, N. Y.
• Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc., Lafayette, Ind.
Cooper & Cooper, Inc., Pittsfield, Mass. (Anthracite).
• Cotta Transmission Co., Rockford, Ill.
Crown Iron Works, Minneapolis.
Detroit Stoker Co., Detroit and Monroe, Mich.
Diamond Castings Co., Johnsonburg, Pa.
Diamond Iron Works, Inc., Minneapolis.
Eddy Stoker Corp., Chicago.
Electric Furnace-Man, Inc., Emmaus, Pa. (Anthracite).
Fairbanks, Morse & Co., Chicago, Ill.
Flynn & Emrich Co., Baltimore.
Frederick Iron & Steel, Inc., Frederick, Md.
• Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis.
Fuel Savers, Inc., Harrisburg, Pa.
Gehl Bros. Mfg. Co., West Bend, Wis.
General Machines Co., Inc., Emmaus, Pa. (Anthracite).
General Machinery Co., Spokane, Wash.
Gross-Aire Mfg. Co., St. Louis, Mo.
• Hall-Neal Furnace Co., Indianapolis, Ind.
Heatcraft Company, Louisville, Ky.
Heating Assurance Inc., Spokane, Wash.
Hemp & Co., Inc., Macomb, Ill.
Hershey Machine & Foundry Co., Manheim, Penn.
• Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Ind.
Illinois Iron & Bolt Co., Chicago.
Iron Fireman Mfg. Co., Cleveland.
Kingston Products Corporation, Tipton, Ind.
Kol-Master Corp., Oregon, Ill.
Leas Co., H. Leslie, Monona, Ia.
• Meyer Furnace Co., Peoria, Ill.
Muncie Gear Works, Inc., Muncie, Ind.
National Steam Pump Co., Upper Sandusky, O.
National Stoker Company, Inc., St. Louis (Bit).
Nelson Bros. & Strom Co., Racine, Wis. (Bit).
Newcomb-Detroit Co., Detroit, Mich.
Northern Steel & Stoker Corp., Peoria, Ill.
Ormsby-Osterman Co., St. Louis.
Plymouth Industries, Inc., Plymouth, Ind.
Pocahontas Fuel Co., Inc., Cleveland.
Premium Coal & Oil Co., Cincinnati, Ohio.
Rheem Manufacturing Co., New York City.
Rosedale Fdry. & Mach. Co., N. S., Pittsburgh.
• Schwab Furnace Co., Milwaukee, Wis.
Schwab Safe Co., Lafayette, Ind.
Scott-Newcomb, Inc., St. Louis.
Steel Products Engineering Co., Springfield, O.
Stoker-Ola Mfg. Co., Peoria, Ill.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sun-Fire Stoker Corporation, New Albany, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tropic-Air Stoker Co., Canton, O.
U. S. Machine Corporation, Lebanon, Ind.
Westinghouse Electric Corporation, Pittsburgh, Pa.
Whiting Fire Power Products Corp., Superior, Wis.
Whitty Company, Inc., Boston, (Bituminous)
Will-Burt Co., Orrville, O.
Woolley Engineering Co., Detroit.

STOVES

See Heaters

SWITCHES, MAGNETIC

See Controls

SWITCHES, MANUAL

See Controls

SWITCHES, TIME

See Controls

TANKS, FUEL STORAGE

Black, Sivalls & Bryson, Inc., Kansas City, Mo.
• Brenner & Co., Inc., Jacob, Fond du Lac, Wis.
Michigan Tank & Furnace Corp., Dearborn, Mich.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Morrison Railway Supply Corp., Buffalo, N. Y.
Rheem Mfg. Co., New York, N. Y.
Siebring Mfg. Co., George, Iowa.

TANK GAUGES, FUEL OIL

See Gauges, Tank, Fuel Oil

TEES

See Angles, Bars, Beams, Channels, and Tees

TEMPERATURE CONTROLS

See Controls; Control Systems

TEMPERATURE RECORDERS

See Recorders, Temperature

THERMOMETERS, INDICATING

• Bacharach Industrial Instrument Co., Pittsburgh.
Bailey Meter Company, Cleveland.
Brown Instrument Co., Div. of Minneapolis-Honeywell Reg. Co., Philadelphia.
Cooper Oven Thermometer Co., Pequabuck, Conn.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Defender Instrument & Regulator Co., St. Louis.
Fee & Stemwedel, Inc., Chicago.
Foxboro Co., Foxboro, Mass.
Fries Instrument Div., Baltimore, Md.
G. M. Mfg. Co., New York City.
H-B Instrument Co., Philadelphia, Penn.
Hill & Co., E. Vernon, Chicago, Ill.
Illinois Testing Laboratories, Inc., Chicago.
Leeds & Northrup Co., Philadelphia.
Manning, Maxwell & Moore, Inc., Bridgeport, Conn.
Marsh Instrument Co., Skokie, Ill.
• Marshalltown Manufacturing Co., Marshalltown, Ia.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
Moeller Instrument Co., Richmond Hill, N. Y.
Palmer Thermometers, Inc., Cincinnati.
Philadelphia Thermometer Co., Philadelphia.
Powers Regulator Company, Chicago (Dial).
Precision Thermometer & Instrument Co., Philadelphia.
Preferred Utilities Mfg. Corp., New York City.
• Rochester Mfg. Co., Inc., Rochester, N. Y.
Sarco Company, Inc., New York City.
Tagliabue Corp. (N. J.), C. J., Newark, N. J.
Taylor Instrument Companies, Rochester, N. Y.
United States Gauge Div., Sellersville, Pa.
Weksler Thermometer Corp., New York City.
Weston Electrical Instrument Corp., Newark, N. J.
Wheelco Instruments Company, Chicago.

THERMOSTATS

See Controls

THROUGH WALL FLASHINGS

See Flashings, Through Wall

TIME SWITCHES

See Controls

TIMERS, WELDING

Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Temperature Control Co., Inc., Philadelphia.
Cutler-Hammer, Inc., Milwaukee.
Electronic Products Co., Geneva, Ill.
Feer, Inc., Benton Harbor, Mich.
Photoswitch, Inc., Cambridge, Mass.
Sciaky Bros., Inc., Chicago, Ill.
Westinghouse Electric Corporation, Pittsburgh, Pa.

TINNING

See Baths, Tinning

TIPS, DAMPER

See Clips and Tips, Damper

TOGGLE BOLTS

See Bolts, Toggle

TOOLS, ROOFERS'

• Adams Company, Dubuque, Ia. (Scaffold Brackets)
Aeroil Products Co., Inc., South Hackensack, N. J. (Melting Kettles, Hoists, Buckets and Accessories)
Ajax Building Bracket Co., Cleveland Heights, O. (Brackets)
Belden Machine Company, New Haven, Conn. (Hammers, rippers & stakes)
Connery Construction Co., Philadelphia. (Kettles)
Eiermann Floor Scraper Co., York, Pa. (Roof Scrapers)
• Frey & Co., Frank P., Chicago.
Hauck Manufacturing Co., Brooklyn. (Asphalt and Pitch Kettles)
Littleford Bros., Inc., Cincinnati. (Kettles)
Mohawk Metal Products Co., Frankfort, N. Y. (Kettles)
Moser & Son Manufacturing Co., Bluffton, Ind. (Ladder Jacks)
Newark Ladder & Bracket Co., Inc., Clark (Rahway), N. J. (Roof brackets)
• Niagara Machine & Tool Works, Buffalo, N. Y. (Tongs, double seamers, slater's tools)
• Owens-Corning Fiberglas Corporation, Toledo, O. (Fiberglas Mop Yarn)
• Peck, Stow & Wilcox Co., Southington, Conn. (Hammers, awls, rivet sets, groovers, etc.)
Rose Manufacturing Co., Denver, Colo. (Ladder Shoes)
Southbridge Roofing Company, Inc., Southbridge, Mass. (Scrapers, spreaders, fire pots, buckets & kettles)
Sperry & Co., D. R., Batavia, Ill. (Kettles)
Storts & Son, Inc., John, Philadelphia. (Tongs, Seamers, Scrapers, Jointers, Punches, Hammers, Rippers, Stakes)
Structural Slate Co., Pen Argyl, Penn. (Hammers, rippers, stakes, cutters, punches)

TOOLS, SHEET METAL WORKERS'

Akron Steel & Sales, Inc., Akron, Ohio. (Ladder Base, Metal Stretcher, Shrinker, Jogging Blocks, Metal Cutter—Power)
Allen, H. D., Los Angeles, Calif., (Template center punches)
• Barth Mfg. Co., Millidale, Conn. (Hand rivet sets, groovers, punches, awls.)
Beall Pipe & Tank Corporation, Portland, Ore. (Carrier for Sheets)
Black & Decker Mfg. Co., Towson, Md. (automatic screw driver, portable electric tapper)
• Bruno Tools, Beverly Hills, Calif. (Hole cutters)
Carboloy Company, Inc., Detroit. (Concrete Drills)
• Champion Tool Co., Los Angeles. (Pipe Crimper)
Chicago Pneumatic Tool Company, New York City. (Rivet)
Circo Tool Co., Milwaukee. (Hole Cutters)
Clemson Bros., Inc., Middletown, N. Y. (Hack Saws)
Colson Equipment & Supply Co., Los Angeles (Truck)
Crandall Mfg. Co., Los Angeles. (Drill Grinders)
• Crescent Tool Co., Jamestown, N. Y. (Scratch awls, pliers, pullers, screw drivers, wrenches)
Damascus Steel Products Corporation, Rockford, Ill. (Punches, Chisels, Star Drills, Nippers, etc.)
Davis & Son Machine Works, Los Angeles. (Clip Punch)
Delta Mfg. Div., Rockwell Mfg. Co., Milwaukee, Wis.
Downs-Smith Brass & Copper Co., Inc., New York City. (Hammers)
Excelsior Tool and Machine Co., East St. Louis, Ill. (Sheet Clamps)
Fairmount Tool & Forging Co., Cleveland. (Caulking Irons, File Holders, Pliers, Solder Paddle, Chisels, Punches, Hammers)
• Fallsington Mfg. Co., Fallsington, Penn. (Multi-notcher)
Fox Noiseless Hammer Co., Collingdale, Penn. (Seaming Hammer)
Frayn Co., N. J., Redwood City, Calif. (Hole Cutters)
Gouran, Mark F., Inc., Philadelphia, Penn. (Welding fixtures)
H & H Research Co., Detroit, Mich. (Reciprocating action, filing, honing, scraping, burring, lapping, sanding, chamfering, polishing, sawing.)
Haines Gauge Company, Inc., Philadelphia. (Thickness Gauges)
Handees Co., Bloomington, Ill. (Truck)
Hanlan Company, Los Angeles. (Elec. Appliance Tester)
Howes-Woods Co., Cambridge, Mass. (Hack Saw)
Hub Specialty Co., Reading, Mass. (Awl).
Independent Pneumatic Tool Co., Aurora, Ill. (Impact wrenches, screw drivers, nut setters, tappers—electric & pneumatic)
Interstate Sales Co., New York City. (Angle Meters, Circle Meters, Divisor, Center Finder, Protractor)
Jewel Mfg. Co., St. Paul, Minn. (Welding Clamps)
Johnson, Inc., Wm., Newark, N. J. (Tinners' Rivet Sets)
Johnson Ladder & Shoe Co., Eau Claire, Wis. (Ladder Shoes)
Knu-Vise Incorporated, Detroit. (Vise Wrench)
Lufkin Rule Co., Saginaw, Mich. (Tape, flexible, circumference, etc.; center punches, scribers, etc.)
Lyon Metal Products, Inc., Aurora, Ill. (Stock cart, tool stand, tool boxes)
Machine Rebuilding Co., Detroit, Mich.
• Maplewood Machinery Co., Chicago. (Trammel, Marking Tool)
• Mehl Machinery, Houston, Texas. (Screw Clamps)
• Merchandising & Manufacturing Associates, Inc., Lancaster, Penn. (Rivet cutter, metal stretcher, shrinker, joggling blocks)
Millers Falls Co., Greenfield, Mass. (Hack Saws)
Misener Mfg. Co., Inc., Syracuse, N. Y. (Hole saws)
Morey, Dan, Los Angeles. (Hammers)
Moser & Son Manufacturing Co., Bluffton, Ind. (Spouting tripods)
Munton Manufacturing Company, Franklin Park, Ill. (Hyd. Vise)
Mutual Liquid Gas & Equipment Co., Inglewood, Calif. (Blow Torch)
Newark Ladder & Bracket Co., Inc., Clark (Rahway), N. J. (Ladders & scaffolds)
New England Carbide Tool Company, Cambridge, Mass. (Masonry drill bits)
• Niagara Machine & Tool Works, Buffalo, N. Y. (Stakes, hammers, groovers, hollow punches, etc.)
Nork Products Co., Los Angeles. (Scribers, Dividers, Calipers, Wiggler)
Packham Crimper Co., Mechanicsburg, O. (Crimping Tongs)
• Peck, Stow & Wilcox Co., Southington, Conn. (Seamers, tongs, etc.)
Penn Tool Co., Philadelphia. (Punches, Chisels and Edge Tools)
• Petersen Mfg. Co., Inc., DeWitt, Nebr. (Clamp)
Phillips Drill Co., Chicago. (Anchor Bolt Drill)
• Pioneer Tool Co., Racine, Wis. (Adj. saw handle, pipe crimper, trammel points)
Rapidesign, Inc., Glendale, Calif. (Templates)
Rawlplug Co., Inc., New York, N. Y. (Masonry drills)
• RCS Tool Sales Corp., Joliet, Ill. (All purpose power saw)
R-D Sales Co., Flint, Mich. (Level & angle indicator)
• Reiner & Campbell Co., Inc., Elizabeth, N. J. (Dividers)
Roesch Tool Products, Los Angeles. (Crimper, Clamps)

• Advertisement in this issue. See Index to Advertisers, page 93-D.

Rotary Concrete Drill Co., Pasadena, Calif. (Drill Bits)
Roto-Table Co., Dayton, Ohio. (Power table for turning machines)
Saginaw Saw Co., Saginaw, Mich. (Saw blades)
• Scheck, William, Ridgefield, N. J. (Punches and Scribers)
Scherr Co., Inc., George, New York City. (Micrometers)
Schild Manufacturing Co., Milwaukee. (Cutter)
• Skilsaw, Inc., Chicago, Ill. (Portable power tools)
Smith & Son, Inc., Seymour, Oakville, Conn. (Clamp Pliers)
Snap-On Tools Corp., Kenosha, Wis. (Wrenches, hammers, dollies, rules, etc.)
Stanley Tools, New Britain, Conn. (Punches, Rules, Cold Chisels, Levels, Bit Braces, Squares, Screw Drivers, Bars, Hammers)
Stortz & Son, Inc., John, Philadelphia. (Hammer, Punches, Chisels, Rivet Sets)
Swallow Airplane Co., Wichita, Kansas. (Drivers)
Thompson & Son Co., Henry G., New Haven, Conn. (Saw Blades)
• Topflight Tool Co., Huber Bldg., York, Pa. (Jigs, Riveters, Dimplers, Rivet Removers, Scribing Discs)
• Tri-Saw Corp., St. Louis, Mo. (Portable power saw)
Vinco Products, Asbury Park, N. J. (Center Punches)
• Vital Products Mfg. Co., Cleveland. (Caulking Guns and Cartridges)
Vulcan Electric Co., Danvers, Mass. (Electric Solder Pots)
• Ward Machinery Co., Chicago. (Bender)
Western Tool & Mfg. Co., Inc., Springfield, Ohio. (Clamps)
Whipple Sheet Metal Works, M. S. & L. H., Lansing, Mich. (Clamps)
• Whitney Mfg. Co., W. A., Rockford, Ill. (Tinner's hammers)
• Whitney Metal Tool Co., Rockford, Ill. (Aircraft Rivet Squeezer, Seamer, Hammer, Punches, Rivet Sets, Awls)

TOPS, CHIMNEY

See Caps and Tops, Chimney

TORCHES, BRAZING, CUTTING, WELDING, OXY-ACETYLENE

Aeroil Products Co., Inc., South Hackensack, N. J.
Air Reduction Sales Co., New York City.
American Products Corp., Chicago, Ill. (alcohol)
Atkins and Company, Inc., E. C., Indianapolis. (Brazing)
Bastian-Blessing Co., Chicago.
Berns Co., Otto, Rochester, N. Y. (Brazing)
Black Manufacturing Co., Baltimore, Md.
Borm Mfg. Co., Elgin, Ill.
Dockson Corporation, Detroit.
Ergolyte Mfg. Co., Philadelphia, Penn. (Electric)
General Scientific Equipment Co., Philadelphia, Penn.
Hamilton Tool Co., Hamilton, Ohio.
Harris Calorific Co., Cleveland.
Imperial Brass Mfg. Co., Chicago.
Lee Company, K. O., Aberdeen, S. D. (Welding)
Linde Air Products Co., New York, N. Y.
Marquette Manufacturing Co., Inc., Minneapolis.
Met Sales Co., Rockford, Ill.
Mid-States Welder Mfg. Co., Chicago, Ill.
Minn-Kota Foundry & Mfg. Co., Fargo, N. D.
Modern Engineering Co., St. Louis.
National Cylinder Gas Co., Chicago.
• Reiner & Campbell Co., Inc., Elizabeth, N. J.
Scully Engineering, Ltd., Los Angeles, Calif.
Smith Welding Equipment Corp., Minneapolis, Minn.
Trindl Products, Ltd., Chicago.
Universal Welder Corporation, Cleveland.
Wall Chemicals Div., Liquid Carbonic Corp., Chicago.
Weldit, Inc., Detroit.

TORCHES, SOLDERING

Acet-A-Tips Co., Chicago.
Air Reduction Sales Company, New York City.
All-Gas Equipment Co., Milwaukee. (Butane, propane)
Bastian-Blessing Co., Chicago.
Berns Co., Otto, Rochester, N. Y.
• Clayton & Lambert Mfg. Co., Louisville, Ky.
Diener Mfg. Co., Geo. W., Chicago.
Dockson Corporation, Detroit.
Everhot Mfg. Co., Maywood, Ill.
Fusion Engineering, Cleveland.
General Scientific Equipment Co., Philadelphia, Penn.
Harris Calorific Co., Cleveland.
Ideal Industries, Inc., Sycamore, Ill.
Imperial Brass Mfg. Co., Chicago.
Insto-Gas Corporation, Detroit.
• Johnson Gas Appliance Co., Cedar Rapids, Ia.
Larkin Lectro Products Corp., New York City.
Lenk Mfg. Co., Boston, Mass.
Linde Air Products Co., New York, N. Y.
Met Sales Co., Rockford, Ill.
Minn-Kota Foundry & Mfg. Co., Fargo, N. D.
Modern Engineering Co., St. Louis.
National Cylinder Gas Co., Chicago.
Ransome Company, Emeryville, Calif.
• Reiner & Campbell Co., Inc., Elizabeth, N. J.
Reliable Gas Products Co., Cedar Rapids, Ia.
Sanders, J. A., Fulton, N. Y.
Scully Engineering, Ltd., Los Angeles, Calif.
Sight Feed Generator Co., West Alexandria, Ohio.
Smith Welding Equipment Corp., Minneapolis, Minn.
Torit Manufacturing Co., St. Paul, Minn.
Turner Brass Works, Sycamore, Ill.
Unique Manufacturing Co., Inc., Chicago. (Gasoline, Kerosene)
Wall Chemicals Div., Liquid Carbonic Corp., Chicago.

TRANSFORMERS, IGNITION

Davis & Co., Dean W., Kentland, Ind.
Dongan Electric Manufacturing Co., Detroit.
• General Electric Co., Schenectady, N. Y.
Harvey, Inc., Sid., Valley Stream, N. Y.
Jefferson Electric Company, Bellwood, Ill.
Larkin Lectro Products Corp., New York City.
Newark Transformer Company, Linden, N. J.
Super Electric Products Corp., Jersey City, N. J.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Webster Electric Co., Racine, Wis.

TRANSFORMERS, LOW VOLTAGE

• Barber-Colman Co., Rockford, Ill.
Crown Controls Co., Inc., New Bremen, Ohio.
Davis & Co., Dean W., Kentland, Ind.
Detroit Lubricator Co., Detroit.
Dongan Electric Mfg. Co., Detroit.
Eisler Engineering Co., Newark, N. J.
• General Controls Co., Glendale, Calif.
• General Electric Co., Schenectady, N. Y.
Hercules Electric & Mfg. Co., Inc., Brooklyn.
Jefferson Electric Co., Bellwood, Ill.
Larkin Lectro Products Corp., New York City.
• Mercoid Corporation, Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
Sampsel Time Control, Inc., Spring Valley, Ill.
Taylor-Winfield Corp., Warren, O.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Wagner Electric Corp., St. Louis.
Webster Electric Co., Racine, Wis.
Westinghouse Electric Corporation, Pittsburgh, Pa.

TRANSMISSIONS, VARIABLE SPEED

Allis-Chalmers Mfg. Co., Milwaukee.
Lewellen Mfg. Co., Columbus, Ind.
Link-Belt Company, Chicago.
Reliance Electric & Engineering Co., Cleveland, Ohio.
Salisbury Motors, Inc., Pomona, Calif.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Sterling Electric Motors, Inc., Los Angeles.

TRUCKS, MOTOR

Chevrolet Motor Division, General Motors Corporation, Detroit.
Ford Motor Co., Dearborn, Mich.

TRIM, ORNAMENTAL

See Moulding and Trim, Ornamental

TUBING

Aluminum

Aluminum Company of America, Pittsburgh.
Gray-Wilson Co., Detroit, Mich.
Lewin-Mathes, Lewin Metals Div., St. Louis.
• Revere Copper & Brass Incorporated, New York City.
Reynolds Metals Company, Louisville, Ky.
United Wire & Supply Corp., Providence, R. I.

Copper

American Brass Co., Waterbury, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Conklin Brass & Copper Co., Inc., T. E., New York City.
Gray-Wilson Co., Detroit, Mich.
• Hussey & Co., C. G., Pittsburgh.
Kensico Tube Co., Mt. Kisco, N. Y.
Lewin-Mathes Company, Lewin Metals Div., St. Louis.
Mueller Brass Co., Port Huron, Mich.
Penn Brass & Copper Co., Erie, Penn.
Phelps Dodge Copper Products Corp., British American Tube Div., New York City.
• Revere Copper & Brass Incorporated, New York City.
United Wire & Supply Corp., Providence, R. I.
Wolverine Tube Div., Calumet and Hecla Consolidated Copper Company, Detroit.

Nickel and Nickel Alloy

International Nickel Co., Inc., New York, N. Y.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Steel

Armco Steel Corp., Middletown, Ohio.
• Bethlehem Steel Co., Bethlehem, Penn.
Bundy Tubing Co., Detroit, Mich.
Central Steel & Wire Co., Chicago.
Crucible Steel Co. of America, New York, N. Y.
Laclede Steel Co., St. Louis, Mo.
Michigan Steel Tube Products Co., Detroit.
National Tube Company, Pittsburgh.
• Republic Steel Corp., Cleveland, Ohio.
• Revere Copper & Brass, Inc., New York, N. Y. (Welded)
SKF Steels, Inc., New York City.
Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.
Timken Roller Bearing Co., Canton, Ohio.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

Steel, Stainless

Allegheny-Ludlum Steel Corporation, Pittsburgh.
• Bethlehem Steel Co., Bethlehem, Penn.
Crucible Steel Co. of America, New York, N. Y.
Hill-Chase & Co., Inc., Philadelphia.
Michigan Steel Tube Products Co., Detroit.
National Tube Company, Pittsburgh.
• Republic Steel Corp., Cleveland, Ohio.
Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.
Timken Roller Bearing Co., Canton, Ohio.

UNITS, AIR CONDITIONING

See Air Conditioning Units

UNIT HEATERS

See Furnaces, Winter Air Conditioning, Suspended Type

VACUUM CLEANERS FOR FURNACES

See Cleaners, Vacuum, Furnace

VALVES, GAS PRESSURE REGULATING

American District Steam Company, North Tonawanda, N. Y.
• Barber Gas Burner Co., Cleveland.
Black, Sivalls & Bryson, Inc., Kansas City, Mo.
Davis Regulator Co., Chicago.
Defender Instrument & Regulator Co., St. Louis. (Chronometer)
Detroit Gas Regulator Co., Detroit.
Dockson Corporation, Detroit.
Fisher Governor Co., Marshalltown, Ia.
Gas & Oil Industry Laboratories, Inc., Irvington, N. J.
• General Controls Co., Glendale, Calif.
Golden-Anderson Valve Specialty Co., Pittsburgh.
Harris Calorific Co., Cleveland.
Heckethorn Mfg. & Supply Co., Littleton, Colo.
Illinois Engineering Co., Chicago.
• Mercoid Corp., Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
Norgren Co., C. A., Denver, Colo.
• Penn Electric Switch Co., Goshen, Ind.
Pittsburgh Equitable Meter Div., Rockwell Mfg. Co., Pittsburgh.
Reliance Regulator Div. American Meter Co., Inc., Alhambra, Calif.
Reynolds Gas Regulator Co., Anderson, Ind.
• Standard Remote Control Valve Company, South Pasadena, Calif.
• Thermac Co., Los Angeles.
Weldit, Inc., Detroit.

VALVES, HUMIDIFIER, WATER LEVEL

Beckett & Co., Thomas, Dallas, Texas.
Fisher Governor Co., Marshalltown, Ia.
• General Controls Co., Glendale, Calif.
Golden-Anderson Valve Specialty Co., Pittsburgh.
Imperial Brass Mfg. Co., Chicago, Ill. (Saddle Valves)
McDonnell & Miller, Inc., Chicago.
• Maid-O'-Mist, Inc., Chicago.
• Minneapolis-Honeywell Regulator Co., Minneapolis.
Morey, Dan, Los Angeles.
Scovill Mfg. Co., Morency-Van Buren Div., Sturgis, Mich.
• Skuttle Manufacturing Co., Detroit.
• Viking Air Conditioning Corp., Cleveland.

VALVES, SADDLE

See Pittings, Humidifier, Water Line

VALVES, SOLENOID

See Controls

VANES, DUCT TURNING, INSIDE DUCTS

Air Devices, Inc., New York City.
• Anemostat Corporation of America, New York City. (Equalizing Deflectors)
• Barber-Colman Company, Rockford, Ill.
Register & Grille Manufacturing Co., Inc., Brooklyn.
Titus Manufacturing Corporation, Waterloo, Iowa.
• Tuttle & Bailey, Inc., New Britain, Conn.

VENTILATOR AND FILTER UNITS, WINDOW

Airgard Manufacturing Co., Chicago.
Berger Mfg. Div., Republic Steel Corp., Canton, O.
Ilg Electric Ventilating Co., Chicago, Ill.
Johnson Fan & Blower Corp., Chicago, Ill.
Kaufman Air Conditioning Corp., St. Louis.
Meier Electric & Machine Co., Indianapolis, Ind.
Mellish & Murray Co., Chicago.
National Appliance Company, Detroit.
Reed Unit-Fans, Inc., New Orleans.
Somers, Inc., H. J. Detroit.
• Trade-Winds Motorfans, Inc., Los Angeles, Calif.
Unified Air Conditioner Co., Duluth, Minn.
• Utility Appliance Corporation, Los Angeles.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.

VENTILATORS

Ceiling

• Air Control Products, Inc., Coopersville, Mich.
• Auer Register Co., Cleveland.
• Barber-Colman Company, Rockford, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Penn.
Best Register Co., Milwaukee.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Decatur Iron & Steel Co., Decatur, Ala.
• Elgo Shutter & Manufacturing Co., Detroit.
• Hart & Cooley Mfg. Co., Holland, Mich.
• Inland Steel Products Co., Milwaukee.
Lumm Co., A. H., Toledo, O.
• Miller & Doing, Brooklyn.
• Pryne & Co., Inc., Pomona, Calif.
Robbins & Myers, Inc., Springfield, Ohio.
Simpson Screen Co., Oakland, Calif.
• Tuttle & Bailey, Inc., New Britain, Conn.
Universal Blower Co., Birmingham, Mich.
• United States Register Co., Battle Creek, Mich.

Mushroom

Aeolus Dickinson, Chicago.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Knowles Mushroom Ventilator Co., Upper Montclair, N. J.
• Mueller Furnace Co., L. J., Milwaukee.
Penn Ventilating Co., Philadelphia.

Roof, Fan

Aeolus Dickinson, Chicago.
Aerovent Fan Co., Inc., Piqua, Ohio.
• Air Controls, Inc., Cleveland.
Aladdin Heating Corporation, Oakland, Calif.
Allen Ventilator Div., Rochester, Mich. (Turbine)
American Coolair Corp., Jacksonville, Fla.
American-Larson Ventilating Co., Pittsburgh.
American Steel Band Co., Pittsburgh.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago.
Bar-Brook Manufacturing Co., Inc., Shreveport, La.
Belanger Fan & Blower Co., Detroit.
• Bishop & Babcock Mfg. Co., Cleveland.
Bishop Co., R. H., Champaign, Ill.
Breidert Co., G. C., Los Angeles.
Burt Mfg. Co., Akron, O.
Century Fan & Ventilating Co., Stamford, Conn. (Turbine)
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Chicago Blower Corp., Chicago, Ill.
Chicago Fan & Fin Coil Co., Chicago.
Clay Equipment Corp., Cedar Falls, Ia.
Dana Fan & Blower Corporation, Cincinnati.
Davidson Hy Duty Roof Fan Co., Newton, Mass.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Diehl Mfg. Company, Somerville, N. J.
Dual-Air Fan Corporation, South Elgin, Ill.
Electrovent Fan & Mfg. Co., Chicago.
• Empire Ventilation Equipment Co., Long Island City, N. Y.
Fingles Co., Baltimore, Md.
• Gallaher Company, Owatonna, Minn. (Centrifugal)
Gehri Company, Tacoma, Wash.
Hartzell Propeller Fan Co., Piqua, O.
Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Howes-Woods Company, Cambridge, Mass.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, O.
Iona Ventilator Co., Inc., Philadelphia.
Iron Lung Ventilator Co., Cleveland, Ohio.
Jenn Air Products Co., Indianapolis, Ind.
Johnson Fan & Blower Corp., Chicago.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Kernchen Co., Chicago.

• Advertisement in this issue. See Index to Advertisers, page 93-D.

King Co., Owatonna, Minn.
Lee & Son Co., Thomas, Cincinnati.
Lumm Co., A. H., Toledo, O.
Martin Fan & Blower Co., Chicago.
Mellish & Murray Co., Chicago.
Mountain States Equipment Co., Denver, Colo.
Muckle Mfg. Co., Owatonna, Minn.
Myers Electric Co., Inc., Pittsburgh, Penn.
Newcomb-Detroit Co., Detroit, Mich.
New York Blower Co., Chicago.
Overly Manufacturing Co., Greensburg, Pa.
Pennsylvania Wire Glass Co., Philadelphia.
Peerless Electric Co., Warren, Ohio.
Penn Ventilating Co., Philadelphia.
Pennsylvania Wire Glass Co., Philadelphia. (round accelerator).
Riester & Thesmacher Co., Cleveland, Ohio.
Robbins & Myers, Inc., Springfield, Ohio.
Robertson Co., H. H., Pittsburgh. (Round-Rectangular)
Royal Ventilator Co., Philadelphia.
Somers, Inc., H. J., Detroit.
• Swartwout Co., Cleveland.
• Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Trane Company, LaCrosse, Wis.
Trufio Fan Co., Harmony, Pa.
• Uno Ventilator Co., Cliftondale, Mass. (Turbine)
• Utility Appliance Corporation, Los Angeles.
Van Noorden Company, E., Boston.
Waverly Heating Supply Co., Boston.
• Western Engineering & Mfg. Co., Los Angeles.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Wind-Way Fan & Ventilator Co., New Orleans.
Wing Mfg. Co., L. J., New York City.
Winkler & Sons, Inc., A. E., Milwaukee.

Roof, Gravity

• Accurate Sheet Metal & Mfg. Works, Chicago.
Aeolus Dickinson, Chicago, Ill.
• Air Control Products, Inc., Coopersville, Mich.
Air Devices, Inc., New York City.
Airecon Industries, Detroit, Mich.
Airjet Ventilator Co., Pasadena, Calif.
• Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.
Allen Ventilator Div., Rochester, Mich. (Turbine)
American-Larson Ventilating Co., Pittsburgh.
American Metal Products, Fort Worth, Tex.
American Steel Band Co., Pittsburgh.
Appleton Supply Co., Inc., Appleton, Wis.
Arex Co., Chicago.
Autoforce Ventilating System, Boston.
Berger Furnace Mfg. Co., Pittsburgh, Penn.
Breidert Co., G. C., Los Angeles.
Burt Mfg. Co., Akron, O.
Century Fan & Ventilator Co., Stamford, Conn.
Clay Equipment Corp., Cedar Falls, Ia.
• Clayton & Lambert Mfg. Co., Louisville, Ky.
Day Co., The, Minneapolis.
Danzer Metal Works Co., Hagerstown, Md.
Edwards Mfg. Co., Inc., Cincinnati.
• Empire Ventilation Equipment Co., Long Island City, N. Y.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Fingles Co., Baltimore, Md.
Firecraft Corporation, Chicago.
Gehri Company, Tacoma, Wash.
Hirschman-Fohle Co., Inc., LeRoy, N. Y.
Howes-Woods Company, Cambridge, Mass.
• Inland Steel Products Co., Milwaukee.
Iona Ventilator Co., Inc., Philadelphia.
Iwan Brothers, South Bend, Ind.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Kernchen Co., Chicago.
King Co., Owatonna, Minn.
Klauer Manufacturing Co., Dubuque, Ia.
LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Lee & Son Co., Thomas, Cincinnati
Leslie Welding Company, Chicago.
Lumm Co., A. H., Toledo, O.
Martin Fan & Blower Co., Chicago.
Matt Coil-Less Burner Co., Chicago.
Mellish & Murray Co., Chicago.
Moeschl-Edwards Corrugating Co., Inc., Cincinnati.
• National Metal Fabricators, Chicago.
Newcomb-Detroit Co., Detroit, Mich.
Overly Manufacturing Co., Greensburg, Pa.
Penn Supply & Metal Corporation, Philadelphia.
Penn Ventilating Co., Philadelphia.
Pennsylvania Wire Glass Co., Philadelphia.
Plasteel Products Co., Washington, Penn.
Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
Riggin Metal Products, Inc., Kankakee, Ill.
Robertson Co., H. H., Pittsburgh. (Monitor)
Royal-Apex Mfg. Corp., Brooklyn, N. Y.
Royal Ventilator Co., Philadelphia.
St. Paul Corrugating Co., St. Paul, Minn.
Sheet Metal Mfg. Co., Inc., Brooklyn.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Souther Iron Co., E. E., St. Louis.
Standard Furnace & Supply Company, Omaha, Nebr.
Standard Ventilator Co., Lewisburg, Pa. (Rotary)
Steinhorst & Sons, Inc., Emil, Utica, N. Y.
• Swartwout Co., Cleveland.
• Thor Metal Products Co., Inc., Syracuse, N. Y.
Tierney Rotor Ventilator Co., Minneapolis.
Tiffin Art Metal Co., Tiffin, Ohio.
• Uno Ventilator Co., Cliftondale, Mass. (Turbine)
Vallas, Lionel, Chicago.
Van Noorden Company, E., Boston.
Warner Ventilator Company, LaGrange, Ind. (Spinner)
• Western Engineering & Mfg. Co., Los Angeles.
• Willis Steel Corporation, Galesburg, Ill.
Winkler & Sons, Inc., A. E., Milwaukee.

VIBRATION ISOLATORS

See Bases and Pads

WARM AIR REGISTER SHIELDS

See Shields, Warm Air Register

WASHERS, AIR, HEATING AND VENTILATING

(Capacity 4,000 c.f.m. and up)

Air & Refrigeration Corp., New York City.
Airwasher Corporation, Eaton Rapids, Mich.
• Alton Manufacturing Co., Dallas, Tex.
American Blower Corp., Detroit.
• Bayley Blower Co., Milwaukee.
• Bishop & Babcock Mfg. Co., Cleveland.
Blower Application Co., Milwaukee.
• Buffalo Forge Co., Buffalo.
Carrier Corporation, Syracuse, N. Y.
Centri-Spray Co., Detroit.
• Clarage Fan Co., Kalamazoo, Mich.
Columbus Heating & Ventilating Co., Columbus, O.
• Furbio Company, Hermansville, Mich.
Ice Air Conditioning Co., Inc., Brooklyn.
Mellish & Murray Co., Chicago.
Mountain States Equipment Co., Denver, Colo.
Murray Manufacturing Co., D. J., Wausau, Wis.
New York Blower Co., Chicago.
Northern Blower Co., Cleveland.
Peters-Dalton, Inc., Detroit.
Schmieg Industries, Detroit.
Spray Engineering Co., Somerville, Mass.
Strandwitz & Co., Inc., W. J., Camden, N. J.
Tenny Engineering, Inc., Newark, N. J.
Trane Co., LaCrosse, Wis.
• U. S. Air Conditioning Corp., Minneapolis.
• Utility Appliance Corporation, Los Angeles.
Vilter Mfg. Company, Milwaukee.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
York Corp., York, Pa.

WATERPROOFING

(Coating material)

American Fluresit Co., Cincinnati, Ohio.
Angier Corporation, Framingham, Mass.
Barrett Division, Allied Chemical & Dye Corp., New York, N. Y.
Cabot, Inc., Samuel, Boston.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Carter Paint Co., Liberty, Ind.
Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Flintkote Co., New York City.
Glidden Company, Cleveland.
Henderson & Co., Peter, New York City. (coating)
Horn Co., Inc., A. C., Long Island City, N. Y.
Johns-Manville, New York, N. Y.
Koppers Company, Inc., Pittsburgh.
Lehon Company, Chicago.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
Nebel Manufacturing Co., Cleveland.
Paraffine Companies, Inc., San Francisco, Calif.
Reilly Tar & Chemical Corporation, Indianapolis, Ind.
Ruberoid Co., New York City.
Sisalkraft Co., Chicago.
Sonneborn Sons, Inc., L., New York City.
Southport Paint Co., Savannah, Ga.
Tamms Industries Inc., Chicago, Ill.
Toch Brothers, Inc., Staten Island, N. Y.
Truscon Laboratories, Detroit.
Wasco Flashing Co., Cambridge, Mass.
X-Pando Corporation, Long Island City, N. Y.

WATER HEATING COILS, FIREPOT

See Coils, Fire Pot, Domestic Hot Water

• Advertisement in this issue. See Index to Advertisers, page 98-D.

WELDERS

Arc

A-C-Devices Co., Chicago.
Air Reduction Sales Company, New York City.
Borm Manufacturing Company, Elgin, Ill.
Chicago Precision Machine Company, Chicago.
Electric Arc, Inc., Newark, N. J.
Ergolyte Mfg. Co., Philadelphia. (A.C.)
Eutectic Welding Alloys Corp., New York, N. Y. (Ac)
• Fern, Ralph, Scranton, Pa.
• General Electric Co., Schenectady, N. Y.
Glenn-Roberts Company, Oakland, Calif.
Hammett Electric Mfg. Co., Kansas City, Mo.
Hampton Electric Mfg. Co., Pittsburgh.
Harnischfeger Corp., Milwaukee, Wis. (Ac & dc)
Hercules Electric & Mfg. Co., Inc., Brooklyn.
Hobart Bros. Co., Troy, Ohio. (Ac & dc)
Hollup Corp., Div. National Cylinder Gas Co., Chicago.
Larkin Lectro Products Co., New York City.
Lee Co., K. O., Aberdeen, S. D. (Ac)
Lincoln Electric Co., Cleveland.
Marquette Manufacturing Co., Inc., Minneapolis. (A.C.)
Metal & Thermit Corp., New York, N. Y.
Metalweld, Inc., Philadelphia, Penn.
Mid-States Welder Corp., Chicago, Ill. (A. C.)
Miller Electric Mfg. Co., Inc., Appleton, Wis. (A.C. & D.C.)
National Cylinder Gas Co., Chicago, Ill. (A.C. & D.C.)
Nelson Specialty Welding Equipment Corp., San Leandro, Calif. (Stud welder)
Sight Feed Generator Co., West Alexandria, Ohio.
Smith Corporation, A. O., Milwaukee.
Smith Welding Equipment Corp., Minneapolis, Minn. (Ac)
Trindl Products, Ltd., Chicago.
Universal Welder Corporation, Cleveland.
Westinghouse Electric Corporation, Pittsburgh, Pa.
Will-Weld Mfg. Co., Inc., Omaha, Nebr. (A.C.)

Projection

• Acme Electric Welder Co., Los Angeles.
Acro Welder Mfg. Co., Milwaukee.
Agnew Electric Company, Milford, Mich.
Eisler Engineering Company, Inc., Newark, N. J.
Federal Machine & Welder Co., Warren, Ohio.
Larkin Lectro Products Corp., New York City.
National Electric Welding Machines Co., Bay City, Mich.
Peer, Inc., Benton Harbor, Mich.
Precision Welder and Machine Co., Cincinnati.
Progressive Welder Company, Detroit.
Rex Welder & Engineering Company, Kansas City, Mo.
Sciaky Bros., Inc., Chicago.
Swift Electric Welder Co., Detroit.
Taylor-Winfield Corporation, Warren, O.
Thomson Electric Welder Company, Lynn, Mass.
Universal Welder Corp., Cleveland, Ohio.
Welding Machines Mfg. Co., Detroit.

Resistance

• Acme Electric Welder Company, Los Angeles.
Acro Welder Mfg. Co., Milwaukee.
Agnew Electric Company, Milford, Mich.
Banner Products Company, Milwaukee.
DoALL Co., Des Plaines, Ill.
Eisler Engineering Company, Inc., Newark, N. J.
Expert Welding Machine Company, Detroit.
Federal Machine & Welder Co., Warren, Ohio.
Larkin Lectro Products Corp., New York City.
Mallory & Co., Inc., P. R., Indianapolis, Ind.
Metalweld, Inc., Philadelphia, Penn.
Micro Products Co., Chicago, Ill.
National Electric Welding Machines Co., Bay City, Mich.
Peer, Inc., Benton Harbor, Mich.
Precision Welder and Machine Co., Cincinnati.
Progressive Welder Company, Detroit.
Rex Welder & Engineering Company, Kansas City, Mo.
Sciaky Bros., Inc., Chicago.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corporation, Warren, O.
Thomson Electric Welder Company, Lynn, Mass.
Universal Welder Corporation, Cleveland.

Seam

Acro Welder Mfg. Co., Milwaukee.
Electrical Maintenance & Eng. Co., Cleveland. (Attachment)
Federal Machine & Welder Co., Warren, Ohio.
Larkin Lectro Products Corp., New York City.
National Electric Welding Machines Co., Bay City, Mich.
Precision Welder and Machine Co., Cincinnati.
Progressive Welder Company, Detroit.
Sciaky Bros., Inc., Chicago.
Swift Electric Welder Co., Detroit.
Taylor-Winfield, Corp., Warren, Ohio.
Thomson Electric Welder Company, Lynn, Mass.
Universal Welder Corporation, Cleveland.
Welding Machines Mfg. Co., Detroit.

Spot

A-C-Devices Co., Chicago, Ill.
• Acme Electric Welder Co., Los Angeles.
Acro Welder Mfg. Co., Milwaukee.
Agnew Electric Company, Milford, Mich.
Alphil Spot Welding Co., Brooklyn.
Banner Products Company, Milwaukee.
Curley Electric Mfg. Co., Culver City, Calif.
Eisler Engineering Co., Newark, N. J.
Electric Arc, Inc., Newark, N. J.
Federal Machine & Welder Co., Warren, O.
• Fern, Ralph, Scranton, Pa.
Hercules Electric & Mfg. Co., Inc., Brooklyn.
Larkin Lectro Products Co., New York City.
Micro Products Co., Chicago.
Miller Electric Mfg. Co., Inc., Appleton, Wis.
National Electric Welding Machines Co., Bay City, Mich.
Peer, Inc., Benton Harbor, Mich.
Precision Welder and Machine Co., Cincinnati.
Progressive Welder Company, Detroit.
Rex Welder and Engineering Co., Kansas City, Mo.
Sciaky Bros., Inc., Chicago.
Swift Electric Welder Co., Detroit.
Taylor-Winfield Corporation, Warren, O.
Thomson Electric Welder Company, Lynn, Mass.
Universal Welder Corporation, Cleveland.
Weldex, Inc., Detroit.
Welding Machines Mfg. Co., Detroit.
Westinghouse Electric Corporation, Pittsburgh.

WELDING ROD

See Rod, Welding

WELDING TORCHES

See Torches, Brazing, Cutting, Welding

WHEELS, BLOWER

Advance Aluminum Castings Corp., Chicago.
• Air Controls, Inc., Cleveland.
Atlas Heating and Ventilating Co., Ltd., San Francisco.
• Bayley Blower Co., Milwaukee.
• Bishop & Babcock Mfg. Co., Cleveland.
• Brundage Co., Kalamazoo, Mich.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corporation, Chicago.
• Clarage Fan Co., Kalamazoo, Mich.
Connecticut Blower Co., Hartford, Conn.
General Blower Co., Morton Grove, Ill.
Goetti Bros., Phoenix, Ariz.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Jaden Mfg. Co., Hastings, Nebr.
Jan-Air, Inc., Richmond, Ill.
Johnson Fan & Blower Corporation, Chicago.
• Lau Blower Co., Dayton, O.
Martin Fan & Blower Co., Chicago.
Mayne Products Co., Dayton, O.
• Morrison Products, Inc., Cleveland.
New York Blower Co., Chicago.
• Peerless Electric Co., Warren, Ohio.
Revcor, Chicago, Ill.
Schwitzer-Cummins Company, Indianapolis.
Torrington Mfg. Co., Burden Div., Los Angeles, Calif.
Trane Company, LaCrosse, Wis.
Triangle Mfg. Co., Oshkosh, Wis.
• U. S. Air Conditioning Corp., Minneapolis.
• Utility Appliance Corporation, Los Angeles.
• Viking Air Conditioning Corp., Cleveland.
Western Blower Company, Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.

WINDOWS, METAL, HOLLOW OR EXTRUDED

Biersach & Neidermeyer Co., Milwaukee.
Edwards Manufacturing Co., Inc., Cincinnati, Ohio.
Herrmann & Grace Co., Brooklyn.
International Steel Co., Evansville, Ind.
Jamestown Metal Corp., Jamestown, N. Y.
Perkinson & Brown, Chicago.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Russell Co., F. C., Cleveland.
Truscon Steel Co., Youngstown, O.
Vallas, Lionel, Chicago.
Watco Engineering, Inc., Cleveland.
• Willis Steel Corporation, Galesburg, Ill.

WIRE GLASS

See Glass, Wire

WIRE

Allegheny Ludlum Steel Corp., Pittsburgh. (Stainless)
Aluminum Co. of America, Pittsburgh. (Aluminum)

• Advertisement in this issue. See Index to Advertisers, page 98-D.

American Nickeloid Co., Peru, Ill. (Chrome, nickel coated)
American Steel & Wire Co., Cleveland.
Armco Steel Corp., Middletown, Ohio. (Stainless steel)
Berger Mfg. Div., Republic Steel Corp., Canton, O.
• Bethlehem Steel Co., Bethlehem, Pa. (Plain, galvanized)
Chase Brass & Copper Co., Incorporated, Waterbury, Conn. (Coppered)
Columbia Steel Co., San Francisco.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y. (Brass, copper & bronze)
• Continental Steel Corp., Kokomo, Ind.
Copperweld Steel Co., Glassport, Pa. (Copper coated steel)
• Hussey & Co., C. G., Pittsburgh, Penn. (Copper)
Jones & Laughlin Steel Corp., Pittsburgh. (Galvanized)
• Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Laclede Steel Co., St. Louis.
Page Steel & Wire Div., Monessen, Pa.
• Republic Steel Corp., Cleveland. (Steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Roebling's Sons Co., John A., Trenton, N. J. (Steel & copper)
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Wickwire Spencer Steel Div., Colorado Fuel & Iron Corp., New York, N. Y.
Youngstown Sheet & Tube Co., Youngstown, O.

WIRING MACHINES

See Machines, Wiring

ZONE CONTROLS

See Controls; Control Systems

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Section of

American Artisan

1950 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[Section 2-TRADE NAMES]

A

AAF—Air Filters, American Air Filter Co., Inc., Louisville, Ky.

A & R—Louvers and Shutters. Air & Refrigeration Corp., New York, N. Y.

ABC—Blower-Washer Units. American Blower Corp., Detroit.

ABC—Oil Burners. Automatic Burner Corp., Chicago, Ill.

ABC—Heaters. Victor Oil Burner Mfg. Co., Hartford, Conn.

ACB—Metal Protecting Paint. Tropical Paint & Oil Co., Cleveland.

A/C—Washable Filters. American Air Filter Co., Inc., Louisville, Ky.

A-D Board—Board for Ducts. Philip Carey Mfg. Co., Cincinnati.

AGM—Space and Water Heaters. American Gas Machine Co., Albert Lea, Minn.

AM—Solder. Alpha Metals, Inc., Brooklyn.

AMS—Pumps. American-Marsh Pumps, Inc., Battle Creek, Mich.

A-P—Heat Regulators, Thermostats, Solenoids. Automatic Products Co., Milwaukee, Wis.

A-P Dependable—Controls. Automatic Products Company, Milwaukee.

A.R.A.—Asbestos Return Air Sheets. Grant Wilson, Inc., Chicago.

ASBO—Ventilators. American Steel Band Co., Pittsburgh.

ate—Timers. Automatic Temperature Control Co., Inc., Philadelphia.

"A.W."—Plates, Sheets, Hardened Masonry Nails. Alan Wood Steel Co., Conshohocken, Penn.

Abrasoweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Ace—Hammers and Mallets. Dan Morey, Los Angeles.

Ace—Welders. Peer, Inc., Benton Harbor, Mich.

Ace—Damper Regulators. Martens & Stormoen Co., Boston.

Acid-Proof—Insulating Cement. Quigley Company, New York City.

Acme—Ozone Apparatus. A & J Co., Chicago.

Acmeley—Electrodes. Acme Electric Welder Co., Los Angeles.

Acoustigin—Cement. Hetzel Roofing Products Co., Newark, N. J.

Acratherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Actane—Water Heaters. M. M. Hedges Mfg. Co., Inc., Chattanooga, Tenn.

Activ-Air—Air Conditioning Furnaces. Heil Co., Milwaukee, Wis.

Activ-Flame—Oil Burners. Heil Co., Milwaukee, Wis.

Adamant—Refractories. Botfield Refractories Co., Philadelphia.

Adamant—Insulating Cement, Refractories. Botfield Refractories Co., Philadelphia.

Adspatch—Refractories. Botfield Refractories Company, Philadelphia, Pa.

Ada-Stic—Insulating Cement. Botfield Refractories Co., Philadelphia, Pa.

Adsco—Valves. American District Steam Co., North Tonawanda, N. Y.

Aeracool—Fan Blades, Fans, Louvres and Shutters, Ventilators. Myers Electric Co., Pittsburgh, Pa.

Aeriseweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Aero—Fans. Pryne & Co., Pomona, Calif.

Aerofuse—Air Diffusers. Tuttle & Bailey, Inc., New Britain, Conn.

Aerolux—A. C. Furnaces. S. T. Johnson Co., Oakland, Calif.

Aeromatic—Furnaces. United Air Heaters, Inc., Seattle, Wash.

Aeropel—Kitchen Exhaust Fans. American Blower Corp., Detroit, Mich.

Aeroplane—Ventilators. Paul R. Jordan & Co., Inc., Indianapolis, Ind.

Aeroplex—Blowers. Bayley Blower Co., Milwaukee, Wis.

Aeropull—Ventilators. Paul R. Jordan & Co., Inc., Indianapolis, Ind.

Aerovane—Grilles, Registers. Tuttle & Bailey, Inc., New Britain, Conn.

Afco—Blowers, Blower-Filters, Furnaces and Stokers, Gas and Oil Burners. American Furnace Co., St. Louis, Mo.

Afco "Duo Bio"—Furnaces. American Furnace Co., St. Louis, Mo.

Afco Master-Gas—Furnaces. American Furnace Co., St. Louis, Mo.

Affco — Grilles, Louvres. American Foundry & Furnace Co., Bloomington, Ill.

AGE—Furnaces. All-Gas Equipment Co., Milwaukee.

Agile—Welding Electrodes. American Agile Corp., Cleveland.

Agitair—Air Diffusers, Filters, Vanes, Ventilators. Air Devices Inc., New York City.

Airaconstic — Insulation. Johns-Manville, New York City.

Airate—Ventilators. Aeolus Dickinson, Chicago.

Airboy—Blower Filter. The Peerless Electric Co., Warren, Ohio.

Aircell—Duct Insulation. Norristown Magnesia & Asbestos Co., Norristown, Pa.

Air Changer—Night Air Cooling Fan, Louvers. Eagle-Picher Co., Cincinnati.

Airco — Electrodes, Soldering Flux, Welding Rod, Torches and Welding Equipment. Air Reduction Sales Co., New York City.

Air-Con—Heating & Ventilating Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Air Control—Air Conditioning Units, Blowers, Blower-Filters, Blower Housings, Coils, Registers, and Wheels. Hastings Air Conditioning Co., Inc., Hastings, Nebr.

Air Controls—Ridge Ventilator. Plasteel Products Co., Washington, Pa.

Air Drills—Pneumatic Tools. Air-Speed Tool Co., Los Angeles.

Air-Dryette Jr.—Dehumidifiers. Solvay Sales Div., New York City.

Aire-Flo—Furnaces. Lennox Furnace Co., Marshalltown, Ia.

Aire-Lok—Water Heaters. Fauce Hot Heater Co., LaPorte, Ind.

Aire-RAY-ator — Furnaces. Ray Oil Burner Co., San Francisco.

Airex—Air Conditioning Units, Blowers, Fans, Washers. Mountain States Equipment Co., Denver, Colo.

Air-Flo—Motor Operated Louvers. Air Conditioning Products Co., Detroit.

Airflo—Pipe, Fittings and Accessories. Inland Steel Products Co., Milwaukee.

Air Flow — Blowers, Fans, Blower Wheels. Goetti Bros., Phoenix, Ariz.

Airfoil—Axial Flow Fans. Thermo-Aire Div., Evans Products Co., Plymouth, Mich.

Airfoil—Fans, Fan Blades, Ventilators. Aerovent Fan Co., Inc., Piqua, Ohio.

Airfoil—Grilles, Louvers, Registers. Titus Mfg. Corp., Waterloo, Iowa.

Air Guide—Duct Vanes. Titus Manufacturing Corporation, Waterloo, Iowa.

Airguide—Hygrometers and Thermometers. Fee & Stemwedel, Inc., Chicago, Ill.

Airidge — Ridge Ventilators. Aeolus Dickinson, Chicago.

Airistocrat — Fan Blades. Torrington Mfg. Co., Torrington, Conn.

Airjector—Ventilators. Swartwout Co., Cleveland.

Air-Lift—Blowers and Fans. Mauer Engineering, Evanston, Ill.

Airlux—Electric Floor Furnaces. Hull Enterprises, Los Angeles, Calif.

Airmat—Dust Collectors, Filters. American Air Filter Co., Inc., Louisville, Ky.

Air Meter—Anemometers. Hastings Instrument Company, Inc., Hampton, Va.

Airmixt—Gas Burners. F. C. Williams, Inc., Detroit.

Airmover—Blowers. Skuttle Mfg. Co., Detroit, Mich.

Airmover — Ventilators. Swartwout Company, Cleveland, O.

Air-O-Matic — Air Conditioning Units. Williams Oil-O-Matic Division, Eureka-Williams Corp., Bloomington, Ill.

Airo-Flux—Directional Flow Registers. Auer Register Co., Cleveland.

Airotor — Blower Wheels. Torrington Mfg. Co., Torrington, Conn.

Air-Out—Ventilator. Accurate Sheet Metal & Mfg. Co., Chicago.

Airsan—Wire Cloth Filters. Air Filter Corp., Milwaukee, Wis.

Air-Seal—Oil Burners. Silent Glow Oil Burner Corp., Hartford, Conn.

Airstat—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis.

Airstream — Blower Wheels. Morrison Products, Inc., Cleveland.

Airtopia — Air Conditioning Units. Drayer-Hanson, Inc., Los Angeles.

Air Tumbler—Dust Collectors. Dust Suppression & Engineering Co., Lake Orion, Mich.

Air-Turn—Vanes. Barber-Colman Co., Rockford, Ill.

Air Valve—Ventilators. Swartwout Co., Cleveland.

Air-Van — Roof Ventilators. Gallaher Co., Owatonna, Minn.

Air-Vane—Registers. Rock Island Register Co., Rock Island, Ill.

Air-Vent—Roofing Felt. Ruberoid Co., New York.

Air Wave—Ventilating Fans. Trade-Wind Motorfans, Inc., Los Angeles.

Airway—Louvers and Ventilators. Firecraft Corporation, Chicago.

Airweight—Aluminum Ladders. Newark Ladder & Bracket Co., Inc., Rahway, N. J.

Air-X-Hauster—Ventilators. G. C. Breidert Co., Los Angeles.

AirXpeler—Exhausters, Fans, and Ventilators. C. L. Ammerman Co., Minneapolis, Minn.

Akron Air Blast—Furnaces. May-Fiebeger Co., Newark, Ohio.

AkTiv — Cleaning Compound. Turco Products, Inc., Los Angeles.

Alclad—Sheets. Aluminum Company of America, Pittsburgh.

Alco—Ventilators. A. H. Lumm Co., Toledo, Ohio.

Alcoa—Aluminum Products. Aluminum Co. of America, Pittsburgh, Pa.

All-Alloy — Shears. Bremil Mfg. Co., Erie, Pa.

Allegheny Metal—Stainless. Allegheny Ludlum Steel Corp., Pittsburgh, Penn.

Allen-Flux—Soldering Flux. L. B. Allen Co., Inc., Chicago.

Allerton—Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

All-Sol—Flux. L. B. Allen Co., Chicago.

Alltite — Insulation. Coast Insulating Corp., Los Angeles.

All-Weather — Roof Cement, Caulking Compounds, Roofing Paint. Ford Roofing Products Company, Chicago.

Alma — Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.

Almar—Hand Slitting Machines, Power Flanging Machines. Ward Machinery Co., Chicago, Ill.

Almar Easy—Rotary Slitting Shears. Ward Machinery Co., Chicago, Ill.

Almer—Thermometers. Illinois Testing Laboratories, Inc., Chicago, Ill.

Alodine—Aluminum surface treatment. American Chemical Paint Co., Ambler, Pa.

Alumaloy—Filters. Research Products Corporation, Madison, Wis.

Alumaroll—Metal Awnings. Wagner Awning & Mfg. Co., Cleveland.

Alumaweld—Flux and Solder. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.

Alumbrite — Paint. Thompson & Co., Pittsburgh, Pa.

Alumi-Flux—Soldering Flux. L. B. Allen Co., Chicago, Ill.

Aluminized — Clad Sheets. American Rolling Mill Co., Middletown, Ohio.

Alumin-ze — Metal Cleaner. NuSteel Company, Chicago.

Alumi-Solder—Aluminum Solder. L. B. Allen Co., Chicago.

Aluminweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Always Reliable—Soldering Furnaces, Mallets, Torches. Otto Berns Co., Rochester, N. Y.

Amazon—Water Heaters. Mustee Heater Co., Cleveland.

Amco—Cabinets (Furnaces, Blowers, Air Conditioners). Atlas Mfg. Co., St. Paul, Minn.

Amco—Flux. American Solder & Flux Co., Philadelphia, Pa.

Amcell—Air Conditioners. American Coils, Inc., Newark, N. J.

American—Water Heaters. Hotstream Heater Co., Cleveland.

Amerock—Cabinet and Casing Hardware. American Cabinet Hardware Corp., Rockford, Ill.

Aminco—Hygrometers, Relays, Thermostats. American Instrument Co., Silver Spring, Md.

Am-Pe-Co—Blowers. American Machine Products Co., Marshalltown, Ia.

Anaconda—Copper and Brass Products. American Brass Co., Waterbury, Conn.

Anchor—Evaporative Coolers, Furnaces. W. H. Stewart Company, Oklahoma City.

Anchor — Hangers. Royal-Apex Mfg. Corp., Brooklyn, N. Y.

AnchorAire—Furnaces. Anchor Div., Stratton & Terstegge Co., New Albany, Ind.

Anchor Brand—Rivets. Townsend Co., New Brighton, Pa.

Anchor Brand—Soldering Flux. Garden City Laboratory, Inc., Chicago.

Anchorfast—Nails. Independent Nail & Packing Co., Bridgewater, Mass.

Anchorite—Nails. Dickson Weatherproof Nail Co., Evanston, Ill.

Anderson—Spray Nozzles. Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Mass.

Anglevel—Level and Angle Indicator. R-D Sales Co., Flint, Mich.

Anthra-So—Coal Fired Air Conditioning Furnaces. Coal-O-Matic Co., Trucksville, Penn.

Anti-Pluvius — Skylights. Hirschman-Pohl Co., Inc., LeRoy, N. Y.

Antoxide—Metal Protecting Paint. E. I. DuPont de Nemours & Company, Wilmington, Del.

Apartvent—Window Ventilating Fans. Autovent Fan & Blower Div., Herman Nelson Corp., Chicago.

Apex—Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.

Apex—Quadrants. Ohio Products Co., Cleveland, Ohio.

Apex Exl-Air—Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.

Apexo—Roof Flashing. Simplex Manufacturing Co., Fond du Lac, Wis.

Apolloy — Copper Steel. Apollo Steel Company, Apollo, Pa.

Appton Super — Pneumatic Hammer. Brown-Appton Co., New York, N. Y.

Apthorp—Oil Burner Nozzles. Boston Machine Works Co., Lynn, Mass.

Aquabar—Roof Cement. Continental Products Co., Euclid, O.

Aqua-Clear—Rust Preventive. Sudbury Laboratory, South Sudbury, Mass.

Aquadam—Roof Cement. Blue Ridge Talc Co., Inc., Henry, Va.

Aquamat—Thermostats. Schaefer Electrical Products Co., Detroit.

Aquaproof—Caulking Compounds, Paint and Waterproofing. Metropolitan Refining Co., Inc., Long Island City, N. Y.

Aqua-Scale—Automatic Humidifier. J. P. Glasby Mfg. Co., Bloomfield, N. J.

Aquatherm—Water Heaters. H. C. Little Burner Co., Inc., San Rafael, Calif.

Aquella—Waterproofing. Peter Henderson & Co., New York City.

Aquiax—Water Heaters. S. T. Johnson Co., Oakland, Calif.

Arcadia—Burners, Burner Devices. Arcadia, Calif.

Arc-Eng—Air Conditioning Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

ArcoFlame—Oil Burners. American Rad. & Standard Sanitary Corp., Pittsburgh, Pa.

Arctic—Air Conditioning Units. Premier Furnace Co., Dowagiac, Mich.

Arctic Circle — Evaporative Coolers. Goetti Bros., Phoenix, Ariz.

Arctic Circle—Evaporative Coolers. International Metal Products Company, Phoenix, Ariz.

Arex-Auster — Ventilators. Arex Company, Chicago.

Aria Accelerator—Louvers and Shutters. Arex Co., Chicago.

Aria Stationary—Louvers and Shutters. Arex Co., Chicago.

Arkay—Furnaces. Quiet Automatic Burner Corp., Newark, N. J.

Arlington—Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Arlington Square—Furnaces. American Radiator & Standard Sanitary Corp., Pittsburgh, Penn.

Armorize—Paint. Carter Paint Co., Liberty, Ind.

Armstrong—Compressors. General Machinery Co., Spokane, Wash.

Arrow—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.

Arrowtrol — Heating and Ventilating Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Artcraft—Blowers and Furnaces. Chicago Steel Furnace Co., Chicago, Ill.

ASARCO—Sheets. Federated Metals Div., American Smelting and Refining Co., New York City.

Asbestile—Roof Cement. Johns-Manville, New York City.

Asbestocel—Furnace Insulation. Johns-Manville, New York City.

Asbo — Ventilators. American Steel Band Co., Pittsburgh.

Asco—Relays, Switches, Valves. Automatic Switch Co., Orange, N. J.

ASCO—Nozzles. April Showers Co., Inc., Washington, D. C.

ASMC—Flux. Farrelloy Co., Philadelphia, Penn.

At-A-Glance—Oil Gauge. Krueger Sentry Gauge Company, Green Bay, Wis.

ATC—Thermostats. Ajax Thermostatic Controls Co., Cleveland.

ATC Gum Timers—Welding Timers. Automatic Temperature Control Co., Inc., Philadelphia.

Ath-A-Ner — Furnaces. May-Fiebeger Co., Newark, Ohio.

Atlantic Breeze—Sidewall Kitchen Fan. Pryne & Co., Inc., Pomona, Calif.

Atlas—Blowers, Furnaces. International Sales Co., San Francisco.

Atomizk—Nozzles. Maid-O'-Mist, Inc., Chicago.

Attlevane—Attic Fans. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Auto—Humidifier Valves. Maid-O'-Mist, Inc., Chicago.

Autocoal—Stokers. Crane Co., Chicago.

Autocrat—Oil Burners. Chandler Company, Cedar Rapids, Iowa.

Auto-Klean—Fuel Oil Filters. Cuno Engineering Corp., Meriden, Conn.

Automat—Gas Conversion Burner. National Engineering & Manufacturing Co., Kansas City, Mo.

Automatic—Air Conditioning Furnaces. Premier Furnace Co., Dowagiac, Mich.

Automatic Heat—Gas Conversion Burners. Ceramic Products Mfg. Co., Milwaukee.

Autostart—Buffers. U. S. Electrical Motors, Inc., Los Angeles.

AutoTherm—Gas Conversion Burner. Hook & Ackerman, Inc., New York, N. Y.

Aviation—Snips. Penn Tool Co., Philadelphia.

AX—Oil Burners. Aldrich Co., Wyoming, Ill.

Axiflo—Fans. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Axivane—Fans. Joy Manufacturing Co., New Philadelphia, Pa.

B

B & B — Louvers & Shutters. Blower Wheels. Bishop & Babcock Mfg. Co., Cleveland.

B & G—Coils. Bell & Gosset Company, Morton Grove, Ill.

B & W—Refractories & Furnace Insulation. Babcock & Wilcox Co., New York, N. Y.

BB—Blast Gates, Roof Clips, Damper Clips and Tips, Conductor Fittings and Accessories, Snow Guards. Berger Brothers Company, Philadelphia.

B. F. C.—Gas Burners. Moncrief Furnace & Mfg. Co., Dallas, Tex.

B-H—Insulating Cement. Baldwin-Hill Co., Trenton, N. J.

B.T.U.—Furnace Cement. Philip Carey Mfg. Co., Cincinnati.

BX—Oil Burners. Aldrich Co., Wyoming, Ill.

Baco — Refractories. Bird Archer Co., Philadelphia.

Badger—Time Switches. Reliance Automatic Lighting Co., Racine, Wis.

Baers—Enamels, Lacquers and Paint. Baer Brothers, New York City.

Baffle Mix—Refractories. Walsh Refractories Corp., St. Louis.

Balanced Isolator—Vibration Isolating Pads. Korfund Co., Long Island City.

Ball Flame — Oil Burners. Kreeno-Stamm Mfg. Co., Palisades Park, N. J.

Balloffet—Nozzles. Delavan Engineering Co., Des Moines, Ia.

Balsam-Wool — Flexible Insulation. Wood Conversion Co., St. Paul.

Bankheat—Oil Burners. S. T. Johnson Co., Oakland, Calif.

Banner — Refractories. Chicago Fire Brick Co., Chicago.

Bantam — Motors. Small Motors, Inc., Chicago.

Bantam—Shear. Lincoln Machine Co., Boston.

Bantam Bully—Air Hammer. Superior Manufacturing Co., Cleveland.

Barcol—Motors. Barber-Colman Company, Rockford, Ill.

Bar-Ox—Rust Inhibitor. Truscon Laboratories, Detroit.

Barreled Sunlight—Paint. U. S. Gutta Percha Paint Co., Providence, R. I.

Barrett Specification—Roofing Felt. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Bar-Rust — Metal Protecting Paint. Midland Paint & Varnish Co., Cleveland.

Barry—Pillow Blocks, Pulleys. R. & J. Dick Co., Inc., Passaic, N. J.

Base—Mallets. Greene, Tweed & Co., North Wales, Penn.

Base Isolator — Vibration Isolating Pads. Korfund Co., Long Island City.

Basmor — Air Conditioning Furnace. Bastian-Morley Co., Inc., LaPorte, Ind.

Base—Pilots. Milwaukee Gas Specialty Co., Milwaukee.

Beckett—Gas Burners. Horeman-Markin Corp., Detroit.

Beckett Commodore—Oil Burners. R. W. Beckett Corporation, Elyria, O.

Beloit — Water Heaters. Hollywood Water Heater Co., Los Angeles, Calif.

Belco—Fans, Louvers. G. J. Belter Electric Mfg. Co., St. Louis.

Beloit — Machines, Punches, Tools. Hendley & Whittemore Co., Beloit, Wis.

Bemis — Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.

Bends-Vane — Registers. Rock Island Register Co., Rock Island, Ill.

Bend-Ray — Grilles and Registers. Standard Stamping & Perforating Co., Chicago.

Berlay — Building Products. Berger Mfg. Co., Div. Republic Steel Corp., Canton, Ohio.

Best—Cast Iron Chimney Caps. Sterling Foundry Co., Sterling, Ill.

Beth-Co-Loy—Sheets. Bethlehem Steel Co., Bethlehem, Pa.

Bettendorf—Oil Burners. Lennox Furnace Co., Marshalltown, Iowa.

Better-Bilt—Furnaces. Barnes Heating & Ventilating Co., Long Beach, Cal.

Biforcator—Blowers. DeRothezat Fans Div., East Moline, Ill.

Bildrite—Sheathing. Insulite Div. Minnesota & Ontario Paper Co., Minneapolis.

Bildit-Master—Anderson Oil Heating Co., Seattle, Wash.

Billy Penn — Sheet Metal Products. Penn Supply & Metal Corporation, Philadelphia.

Biltwel—Furnaces. Fraser & Johnston Co., San Francisco.

Bi-Mix—Gas Burners. John Zink Co., Tulsa, Okla.

Bitumastic—Paint. Koppers Co., Inc., Pittsburgh, Penn.

Bituseal—Paint. Cheesman-Elliot Co., Inc., Brooklyn.

Black Arrow—Spray Guns and Torches. Black Mfg. Co., Baltimore.

Black Asphalt—Roofing Paint. Philip Carey Mfg. Co., Lockland, Ohio.

Black Diamond—Built-up Roofing. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Black Diamond—Stokers. Beckley Perforating Co., Garwood, N. J.

Black Lay—Roof Cement. Philip Carey Mfg. Co., Cincinnati.

Blaszcrete—Refractories. Johns-Manville, New York, N. Y.

B-Line — Motors. Brown-Brockmeyer Co., Dayton, Ohio.

Blo-Aire—Blower-Filter Units. Meyer Furnace Co., Peoria, Ill.

Blo-Fan—Fans and Ventilators. Pryne & Co., Inc., Pomona, Calif.

Bloflex—Flexible Hose. American Ventilating Hose Co., New York City.

Blowertrol — Thermostatic Hydraulic Control. White Mfg. Co., St. Paul.

Blowette — Blower-Filter Units. Lau Blower Co., Dayton, Ohio.

Bluebird—Snips. Bergman Tool Mfg. Co., Buffalo.

Blu-Blaze—Space Heaters. Tesco, Inc., Tulsa, Okla.

Blu-Cold—Compressors. Lehigh Mfg. Co., Lancaster, Pa.

Blue Flame—Gas Conversion Burners. Consolidated Industries, Inc., Lafayette, Ind.

Blue Flame—Rotary Oil Burners. Silent Glow Oil Burner Corp., Hartford, Conn.

Blu-Flame—Gas Burners. Vacuum Gas Burner Company, Olean, N. Y.

Blu-Flex—Hack Saw Blades. Millers Falls Co., Greenfield, Mass.

Blue Knight—Enamels and Lacquers. Roxalin Flexible Finishes, Inc., Elizabeth, N. J.

Blue - Point — Drills, Tools. Snap-on Tools Corp., Kenosha, Wis.

Blue Ridge—Wire Glass. Libbey-Owens-Ford Glass Co., Toledo, Ohio.

Blue Ring—Conversion Gas Burners. Niagara Motors Corporation, Dunkirk, N. Y.

BNCO—Metal Windows, Skylights, Welding and Sheet Metal Work. Bierach & Neidermeyer Co., Milwaukee, Wis.

Bobby—Brake. A. R. Harris, Hammond, Ind.

Bob-Cat—Electric Hoist. Lisbon Hoist & Crane Co., Lisbon, O.

Bonderizing—Metal Processes. Parker Rust-Proof Co., Detroit.

BosMaco—Oil Burners. Boston Machine Works Company, Lynn, Mass.

Boston Breeze—Oil Burners. Boston Machine Works Co., Lynn, Mass.

Boston Chrome—Baffles. Boston Machine Works Co., Lynn, Mass.

Boston-Standard—Draft Dampers. Boston Machine Works Co., Lynn, Mass.

Boyer—Power Hammers. Chicago Pneumatic Tool Co., New York, N. Y.

Bradford — Water Heaters. Pennsylvania Range Boiler Co., Philadelphia.

Branford—Oil Burners. Malleable Iron Fittings Co., Branford, Conn.

Brazare—Electrodes. Universal Welder Corporation, Cleveland.

Braze—Bronze Soldering Flux. Linde Air Products Co., New York City.

Breathe-O-Stat—Thermostats. McLarty Systems, Battle Creek, Mich.

Breese Draftalite — Draft Dampers. Breese Burners, Inc., Santa Fe, N. M.

Breez-Air—Fans. Buffalo Forge Co., Buffalo, N. Y.

BreezeBuilder—Fans. Bar-Brook Mfg. Co., Inc., Shreveport, La.

Breeze—Kitchen Exhaust Fans. Buffalo Forge Co., Buffalo, N. Y.

Brentwood—Water Heaters. National Appliances, Inc., Pittsburgh.

Brevokrak—Crackle Finish Paint. Atlas Powder Co., North Chicago, Ill.

Brick-mix—Plastic Refractory. Chicago Fire Brick Co., Chicago.

Brilliant—Aluminum Paint. Calbar Paint & Varnish Co., Philadelphia.

Brilliant Fire—Space Heaters. Ohio Foundry & Mfg. Co., Steubenville, Ohio.

Bronzend — Electrodes. Arcos Corp., Philadelphia.

BronzoChrome—Gas Welding Rod. Eutectic Welding Alloys Corporation, New York City.

Brown—Gas Burners. Sterling Engineering Co., St. Louis, Mo.

Brown Electronik—Recorders, Minneapolis-Honeywell Regulator Co., Milwaukee.

Brownie—Water Heaters. Brown Steel Tank Co., Minneapolis.

Brownskin—Waterproof Sheathing Paper. Angier Corp., Framingham, Mass.

Bruin—Roofing Paint. Baer Brothers, New York, N. Y.

B-60—Controls. General Controls Co., Glendale, Calif.

Buckeye—Space Heaters. Ohio Stove Company, Portsmouth, Ohio.

Budget—Water Heaters. American Radiator & Standard Sanitary Corp., Pittsburgh.

Bulldog—Snips and Shears. Wiss & Sons Co., Newark, N. J.

Bulldog—Shear. Lincoln Machine Co., Boston.

Bundyweld—Tubing. Bundy Tubing Co., Detroit, Mich.

Bunker Hill—Roofing, Sheets and Solder, Northwest Lead Co., Seattle, Wash.

Bu-Pre-Fire—Furnaces, Heaters, Tennessee Enamel Mfg. Co., Nashville, Tenn.

But-N-ite—Steel Roofing. St. Paul Corrugating Co., St. Paul.

Buzzer — Gas Soldering Furnaces. Charles A. Hones, Inc., Baldwin, N. Y.

C

C & L—Soldering Furnaces and Torches. Clayton & Lambert Mfg. Co., Louisville, Ky.

CDC—Bearings and Pulleys. Chicago Die Casting Company, Chicago, Ill.

C-E Low Ram—Stokers. Combustion Engineering-Superheater, Inc., New York City.

C-E Skelly—Stokers. Combustion Engineering Company, Inc., New York City.

C-H — Relays, Switches and Valves. Cutler-Hammer, Inc., Milwaukee, Wis.

C.H.F.S.Co. — Fittings & Accessories. Chicago Heights Furnace Supply Co., Chicago Heights, Ill.

C J B—Bearings. Ahlberg Bearing Co., Chicago.

CM—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

CMH—Machine Tool Conduit. Chicago Metal Hose Corp., Maywood, Ill.

C.M.W.—Stokers. Catskill Metal Works, Catskill, N. Y.

C.M.W. Hot Water Maker—Stoker-Fired Water Heater. Catskill Metal Works, Inc., Catskill, N. Y.

CP—Electric Tools. Chicago Pneumatic Tool Co., New York City.

C-10 — High Temperature Paint. Laclede-Christy Clay Products Co., St. Louis.

Cable King—Hoist. Yale & Towne Mfg. Co., Philadelphia.

California—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles.

Caloric—Furnaces. Marshall Furnace Co., Marshall, Mich.

Camalloy—Stainless Gutters, Fittings, and Conductor Pipe. Campbell Stainless Products Co., Washington, Penn.

Capillary — Air Conditioning Units, Washers, Filters. Air & Refrigeration Corp., New York City.

Capital—Furnaces. Farris Furnace Co., Springfield, Ill.

Capitolaire—Fans and Furnaces. United States Radiator Corp., Detroit.

Cara-Flux No. 400—Flux solution. Caralon Chemical Co., Inc., Fremont, Mich.

Carbolite—Soot Remover. Ampion Corporation, Long Island City.

Carbonaire—Oil Burners. Breeze Corporations, Inc., Newark, N.J.

Carbureter-Stoker—Industrial Stokers. Woolley Eng. Co., Detroit.

Cardolite—Caulking Compound and Paint. Irvington Varnish & Insulator Co., Irvington, N. J.

Carex-C.P.-5 — Roof Cement. Philip Carey Mfg. Co., Cincinnati.

Carey Coating—Roofing Paint. Philip Carey Mfg. Co., Lockland, Ohio.

Careyzinc — Metal Protecting Paint. Philip Carey Mfg. Co., Lockland, O.

Careyduct — Prefabricated Ducts and Fittings. Philip Carey Co., Lockland, Ohio.

Carilloy—Plate. Carnegie Illinois Steel Corp., Pittsburgh, Penn.

Caro—Flux. Flux-All Chemical Products, New York City.

Castalin—Blower Wheels and Fans. Advance Aluminum Castings Corp., Chicago, Ill.

Cast-Refract — Baffles. Quigley Company, Inc., New York City.

Caulk-N-Seal — Caulking Compound. Blue Ridge Talc Co., Inc., Henry, Va.

Caulk-O-Seal — Caulking and Glazing Compounds. Calbar Paint & Varnish Co., Philadelphia, Pa.

Cauzeul—Compounds, X-Pando Corporation, Long Island City, N. Y.

Ce-Co—Caulking Compounds & Paints. Cheeseman - Elliot Company, Inc., Brooklyn.

Cecotite — Roofing Paint. Cheeseman-Elliot Company, Inc., Brooklyn.

C-E Heatmaster—Water Heaters. Combustion Engineering Co., Inc., Chattanooga, Tenn.

Cell-N-Venter—Ceiling Ventilator. Universal Blower Co., Birmingham, Mich.

Cello-Sponge—Evaporators. Viking Air Conditioning Corp., Cleveland.

Cell-U-Blanket — Insulation. Masonite Corp., Chicago.

Cellufoam—Duct Insulation. Masonite Corporation, Chicago.

Cemcoat—Paint. L. Sonneborn Sons, Inc., New York, N. Y.

Cementkote—Paint. Tropical Paint & Oil Co., Cleveland, O.

Cemesto—Duct Boards. Celotex Corporation, Chicago.

Center-Finder — Protractor. Interstate Sales Co., New York City.

Centerflo—Industrial Fans. Holden Fan Co., Detroit.

Centri-Merge—Dust Collectors. Schmieg Industries, Inc., Detroit.

Centripeller—Ventilating Fans. Paul R. Jordan & Co., Inc., Indianapolis.

Challenger—Air Conditioning Units. Great National Air Conditioning Corp., Oklahoma City, Okla.

Challenger—Fans. Signal Electric Mfg. Co., Menominee, Mich.

Challenger—Circulating Gas Heaters. Independence Stove & Furnace Co., Independence, Mo.

Challenger—Stokers. Kol-Master Corp., Oregon, Ill.

Challenger—Furnaces. Wheeling Furnace Corp., Martins Ferry, Ohio.

Champion — Furnaces. Wheeling Furnace Corp., Martins Ferry, Ohio.

Champion — Water Heaters. Bastian-Morley Co, Inc., LaPorte, Ind.

Champion—Water Heaters. Crane Co., Chicago, Ill.

Chemistone—Fuel Oil Filters. Klemm Automotive Products Co., Chicago, Ill.

Cheerfulator — Space Heaters. Adams Bros. Mfg. Co., Inc., Pittsburgh.

Chester—Water Heaters. Ajax Thermostatic Controls Co., Cleveland, Ohio.

Chicago—Brakes and Presses. Dreis & Krump Mfg. Co., Chicago, Ill.

Chicago—Stokers. Eddy Stoker Corporation, Chicago.

Chicago Steel—Snips and Shears. W. A. Whitney Mfg. Co., Rockford, Ill.

Chicago-Wrigley—Toggle and Anchor bolts. Chicago Expansion Bolt Co., Chicago.

Chico Brikset—High Temperature Cement. Chicago Fire Brick Co., Chicago, Ill.

Chief—Electric Drills, Welders. Chicago Precision Machine Company, Chicago.

Chieftain—Refrigerating Compressors. Tecumseh Products Co., Tecumseh, Mich.

Chill Air—Air Conditioning Units, Recirculating Pumps. National Engineering & Mfg. Co., Kansas City, Mo.

Chillchaser — Heaters. Thermostatic Corp., Willoughby, Ohio.

Chine—Metal. Allan Corp., Trenton, N. J.

Chinook—Heating Coils. Bayley Blower Co., Milwaukee, Wis.

Chore Boy — Conversion Gas Burner. Standard Fuel Engineering Co., Detroit.

Chromend—Electrodes. Arcos Corporation, Philadelphia.

Chromeweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Chromtrim — Light Weight Shapes, Mouldings, Trim. R. D. Werner Co., Inc., New York City.

Chronat—Furnace and Boiler Repairs. National Fdry. & Furnace Co., Dayton, O.

Chronotherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Chrysler-Airtemp—Heating and Cooling Equipment. Airtemp Div., Chrysler Corp., Dayton, Ohio.

Cibalux—Puttyless Skylights. General Sheet Metal Works, Inc., Bridgeport, Conn.

Cinch—Expansion Bolts. National Lead Co., New York City.

Cinco—Windows. R. C. Russell Co., Cleveland, Ohio.

Cinkote—Paint. Blue Ridge Talc Co., Inc., Henry, Va.

Cinti—Elbow. Cincinnati Elbow Co., Cincinnati, Ohio.

Circle T—Switches. Trumbull Electric Mfg. Co., Plainville, Conn.

Circo—Louvers & Shutters. Circulators & Devices Mfg. Corp., New York City.

Circulaire — Wall Furnaces. Hammel Radiator Eng. Co., Los Angeles, Calif.

Circulatairo—Furnace Fan. Corlett-Turner Co., Chicago, Ill.

Circu-Ray—Furnaces and Heaters. Tennessee Enamel Mfg. Co., Nashville, Tenn.

Cirklair—Fans, Furnaces, Heaters. Felsom Co., Inc., Dallas, Tex.

Clark—Oil Burners. National Oil Burner Co., Brooklyn.

Classo—Snow Guards. M. N. Cartier & Sons Company, Providence, R. I.

Classic—Heating & Ventilating Registers. Auer Register Co., Cleveland, O.

Clauss—Snips and Shears. Henkel-Clauss Co., Fremont, Ohio.

Cleanaire — Blower - Filters. Peerless Foundry Co., Indianapolis, Ind.

Clearview—Oil Tank Gauge. Boston Machine Works Co., Lynn, Mass.

Cleveland — Burners, Furnaces. Dornback Furnace & Fdy. Co., Cleveland.

Cliffdale—Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Clifton—Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Climate - Changer — Air Conditioning Units. Trane Co., La Crosse, Wis.

Climate Master—Oil Burning Air Conditioning Furnace. Hess Warming & Ventilating Co., Chicago, Ill.

Climatrol—Blower-Filter Units, Furnaces, Conversion Burners, Furnace and Smoke Pipe Fittings, Humidifiers, Registers, and Ventilators. L. J. Mueller Furnace Co., Milwaukee, Wis.

Clincher—Conductor Fittings and Accessories. Inland Steel Products Co., Milwaukee.

Clipper—Furnaces. Henderson Furnace & Mfg. Co., Sebastopol, Calif.

Clipper—Kitchen Exhaust Fans. Trade-Wind Motorfans, Inc., Los Angeles.

Clipper — Ventilators. Riggin Metal Products, Inc., Kankakee, Ill.

Coinwelding — Flux. Technical Processes Div., Colonial Alloys Co., Philadelphia.

Coilbrazing—Flux. Technical Processes Div., Colonial Alloys Co., Philadelphia.

Colcap—Roofing Felt. Philip Carey Mfg. Co., Cincinnati.

Coldpress — Housings. Commercial Shearing & Stamping Co., Youngstown, Ohio.

Coldstream — Air Conditioning Units. Baker Ice Machine Company, Inc., South Windham, Me.

Cole — Draft Governor. Cole - Sewell Engineering Co., Minneapolis.

Collopakes — Roofing Paint. Samuel Cabot, Inc., Boston.

Colonial—Blower-Filters. Oil Burners. Furnaces. Humidifiers. Heaters. Stokers. Green Colonial Furnace Co., Des Moines, Ia.

Colonial — Conductor Heads and Fittings. Royal-Apex Mfg. Corp., Brooklyn.

Columbia—Air Freshening Compounds. Carbide and Carbon Chemicals Corp., New York, N. Y.

Columbia—Insulation. United States Mineral Wool Co., South Milwaukee, Wis.

Columbia—Ventilators. B. B. Souther Iron Co., St. Louis.

Columbus—Humidifiers. Fred D. Pfening Co., Columbus, Ohio.

Combustioneer—Humidifiers and Stokers. Steel Products Engineering Co., Springfield, O.

Comet—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

Comet—Oil Burners. Zephyr Heating Products Co., Cleveland.

Comet—Water Heaters. Hoyt Heater Co. of No. Calif., Oakland, Calif.

Comet Exhaustair—Fans and Ventilators. New York Blower Co., Chicago, Ill.

Comfort — Furnaces. May - Fiebeger Company, Newark, Ohio.

Comfort-Aire—Gas Burners. Chas. M. Olmstead & Co., Detroit.

Comfortaire—Furnaces. Hammel Radiator Engineering Co., Los Angeles.

Comfortcor—Space Heaters. Inland Steel Container Co., Chicago, Ill.

Comfortmaker—Furnaces. Joliet Heating Corp., Joliet, Ill.

Comfortmaster — Furnaces. Thatcher Furnace Company, Garwood, N. J.

Commander—Furnaces. Peerless Foundry Co., Indianapolis, Ind.

Co-Min-Co—Insulating Cement. United States Mineral Wool Co., Chicago.

Com-Key—Saw Blades. Saginaw Saw Co., Saginaw, Mich.

Compart—Blowers. Bishop & Babcock Mfg. Co., Cleveland, O.

Compact—Oil Burners. Breeze Corporations, Inc., Newark, N. J.

Compass V-Steel—V-Belts. Goodyear Tire & Rubber Co., Akron, Ohio.

Concavex—Pillow Blocks. Shafer Bearing Corporation, Downers Grove, Ill.

Conco-Heat—Furnaces. Conco Engineering Works, Mendota, Ill.

Condor—Belts. Raybestos-Manhattan, Inc., Passaic, N. J.

Coni-Vane—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Conservoil—Oil Burners. Crane Company, Chicago.

Consolaire—Circulating Heaters. Hammel Radiator Eng. Co., Los Angeles.

Consolidated—Presses and Dies. E. W. Bliss Co., Toledo, Ohio.

Centerflow—Air Conditioning Furnaces. Western Blower Co., Seattle.

Contrelaire—Furnaces. St. Louis Furnace Mfg. Co., St. Louis.

Convector — Furnaces. L. J. Mueller Furnace Co., Milwaukee, Wis.

Convector — Humidifiers. Maid-O'-Mist, Inc., Chicago.

Convert — Gas Burners. Columbia Burner Company, Toledo, Ohio.

Convertible—Furnaces. Marshall Furnace Co., Marshall, Mich.

Converto—Ventilators. C. L. Ammerman Co., Minneapolis, Minn.

Coolair—Fans and Ventilators. American Coolair Corp., Jacksonville, Fla.

Cooler-Air—Air Conditioning Units. Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Coolzero—Ventilators. Hirschman-Puhle Co., Inc., LeRoy, N. Y.

Copper-Alloy—Sheets. Inland Steel Co., Chicago, Ill.

Copper-Brite—Metal Finishers. Rossaul Co., New York, N. Y.

Copper-Fabric—Flashing. Wasco Flashing Co., Cambridge, Mass.

Copperseal—Flashing. Wasco Flashing Co., Cambridge, Mass.

Copperskin—Waterproof sheathing paper. Angier Corp., Framingham, Mass.

Cop-R-Loy — Copper Bearing Steel Sheets. Wheeling Steel Corp., Wheeling, W. Va.

Cop-R-Tex—Thru-Wall Flashing. Wasco Flashing Co., Cambridge, Mass.

Corinco — Insulation. Cork Insulation Co., Inc., New York, N. Y.

Corkboard — Insulation. Armstrong Cork Co., Lancaster, Pa.

Corkboard—Insulation. Mundet Cork Corp., Brooklyn, N. Y.

Corozone—Ozone Apparatus. Corozaire Heater Corp., Cleveland.

Cor Ten—Steel Plates. Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

Corvette — Water Heaters. Security Manufacturing Co., Kansas City, Mo.

Cottrell Process — Collectors. Western Precipitation Corp., Los Angeles.

Counterflo—Direct Fired Heaters. Dravo Corporation, Pittsburgh, Pa.

Cozy—Furnaces. Advance Furnace Co., Wichita, Kans.

Crane Burner—Furnaces. Bastian-Morley Co., Inc., LaPorte, Ind.

Crane-Line—Burners, Fans, Furnaces, Water Heaters, Stokers. Crane Co., Chicago, Ill.

Crazy's—Cut-Offs. Galvan Manufacturing Co., New Albany, Ind.

Crescent — Furnaces. Green Colonial Furnace Co., Des Moines, Ia.

Crest — Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Crestolay—Tools. Crescent Tool Co., Jamestown, N. Y.

Cristorch—Welding Torch. Hamilton Tool Co., Hamilton, Ohio.

Cromalay — Stainless Soldering Flux. Linde Air Products Co., New York City.

Crown Heat King — Gas Conversion Burner. B. G. B. Manufacturing Company, Dearborn, Mich.

Crown—Torches. Bully Engineering, Ltd., Los Angeles, Calif.

Crusader—Oil Burners. Bethlehem Fdry. & Mach. Co., Bethlehem, Pa.

Crystal—Crackle Finish Paint. Hilo Varnish Corp., Brooklyn.

Cupromatic—Electric Water Heaters. Cuprometal Manufacturing Corp., Corona, N. Y.

Custom-Aire—Furnaces and Heaters. Heating Equipment Mfg. Co., San Francisco.

Cyclone—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

Cyclone—Drill-bits. New England Carbide Tool Co., Cambridge, Mass.

D

D & D—Hole Cutter. N. J. Frayn Company, Redwood City, Calif.

DFC—Refractories and Insulating Cement. Denver Fire Clay Co., Denver, Colo.

Dampertrol—Controls. Hotstream Heater Co., Cleveland.

Da-Nite Aerotherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Daptoble—Gas Burners. Beck Engineering Combustion Kompany, St. Louis.

Dasco—Punches, Tools. Damascus Steel Products Corporation, Rockford, Ill.

Dayton Thorobred — V-Belts. Dayton Rubber Mfg. Co., Dayton, Ohio.

Day-Steel — Pulleys. Dayton Rubber Mfg. Co., Dayton, Ohio.

Deco-Shingles — Metal Shingles. Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati.

Decoseal—Paints. Debevoise Co., Brooklyn.

Defender—Oil Burners. Silent Glow Oil Burner Corp., Hartford, Conn.

Deflecto—Ventilators. The Day Co., Minneapolis, Minn.

Deflectrol—Duct Turning Vanes. Barber-Colman Co., Rockford, Ill.

Dehydratine — Waterproofing. A. C. Horn Co., Inc., Long Island City.

Delco — Time Switches. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Delco-Heat—Oil Burners and Furnaces. Delco Appliance Div., General Motors Corp., Rochester, N. Y.

Delphos—Ridge Roll and Roofing. New Delphos Mfg. Co., Delphos, Ohio.

DeLuxe—Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.

Deoxidine — Metal Protecting Paint. American Chemical Paint Co., Ambler, Pa.

Dependable—Paint. Heath & Milligan Mfg. Co., Chicago, Ill.

Derco—Gas Burners. Alco-Derco Co., Chicago.

Dereko—Paint. Debevoise Co., Brooklyn, N. Y.

Desert-Air — Burners and Furnaces. Central States Mfg. Co., Inc., Arkansas City, Kans.

Desert-Ray — Furnaces and Heaters. Hirsh Manufacturing Co., Garland, Texas.

De-Sta-Co — Blower Housings and Stampings. Detroit Stamping Co., Detroit.

Detroit LoStoker — Stokers. Detroit Stoker Co., Detroit.

Detroit RotoStoker—Overfeed Spreader Stoker. Detroit Stoker Co., Detroit.

Detroit UniStoker — Stokers. Detroit Stoker Co., Detroit.

DeVulcan—Gas Burners. National Burner & Mfg. Co., Detroit.

Dexter Heat Valve—Ridge Ventilators. Swartwout Co., Cleveland.

Di-Acro—Precision Machines. O'Neil-Irwin Mfg. Co., Minneapolis.

Dial — Damper Regulator. Martens & Stormoen Co., Boston.

Dial — Damper Regulators. Parker-Kalon Corp., New York, N. Y.

Dial-Set — Stokers. Kol-Master Corp., Oregon, Ill.

Diamond—Caulking Compounds and Paint. Thompson & Co., Pittsburgh, Penn.

Diamond—Smoke Pipe Dampers. Adams Company, The, Dubuque, Ia.

Diamond—Water Heaters. A. Y. McDonald Mfg. Co., Dubuque, Ia.

Diamond H—Controls, Switches. Hart Mfg. Co., Hartford, Conn.

Dickinson—Ventilators. Aeolus Dickinson, Chicago, Ill.

Dickrope—V-Belts. R. & J. Dick Co., Passaic, N. J.

Directaire—Air Conditioning Furnaces. Fitzgibbons Boiler Co., Inc., New York City.

Directrol—Duct Turning Vanes. Register & Grille Mfg. Co., Brooklyn.

Divco—Tinning Baths, Brushes, Flashing, Flux, Sheets, Solder. Division Lead Co., Chicago, Ill.

Dixie — Water Heaters. Hotstream Heater Co., Cleveland.

Dixie Bell—Water Heaters. Hotstream Heater Co., Cleveland.

Dixie Star—Water Heaters. Hotstream Heater Co., Cleveland.

Do-All—Hammer. Wodack Electric Tool Corp., Chicago.

Do-Mor—Adj. Keyhole Saw. Pioneer Tool Co., Racine, Wis.

Dorex—Odor Adsorbers. W. R. Connor Eng. Corp., New York City.

Double Diamond — Humidistats, Psychrometers, Relays, Switches, Thermometers. H-B Instrument Company, Philadelphia, Pa.

Double-Duty—Oil Burners. Breeze Corporations, Inc., Newark, N. J.

Double-Seal—Humidifier Fittings. Hays Mfg. Co., Erie, Pa.

Dover—Conductor Fittings. Ohio Wire Products Co., Dover, Ohio.

DovRiley—Sheets. Reeves Steel & Mfg. Co., Dover, Ohio.

Dowmetal—Plates, Sheet, Light Weight Shapes. Dow Chemical Company, Midland, Mich.

Downflame—Gas-Oil Burners, Floor Furnaces. United Air Heaters, Inc., Seattle, Wash.

Downflo—Highboy Furnaces. United Air Heaters, Inc., Seattle, Wash.

Draft-A-Juster — Barometric Dampers. Preferred Utilities Mfg. Corp., New York City.

Draft KoreKtor—Damper. Cole-Sewell Engineering Co., Minneapolis.

Draftender—Motors, Draft Regulators. Penn Electric Switch Co., Goshen, Ind.

Draft-O-Stat—Draft Regulators and Smoke Pipe Dampers. Hotstream Heater Company, Cleveland.

Draftrite—Draft Gages. Bacharach Industrial Instrument Co., Pittsburgh.

Dri-Air—Dehumidifiers. Tamms Industries Inc., Chicago, Ill.

DriFilter—Filters. American Air Filter Co., Inc., Louisville, Ky.

Dri-Lap—Roofing. Globe Iron Roofing & Corrugating Co., Newport, Ky.

Dri-N-Tite—Cement. A. C. Horn Co., Inc., Long Island City, N. Y.

Drive-it — Power Hammers. Powder Power Tool Corp., Portland, Oreg.

Driwal—Waterproofing Compound. The Glidden Co., Cleveland.

Drou-ve-lite — Skylights. Hirschman-Pohl Co., Inc., LeRoy, N. Y.

Dry Kiln — Furnace Cement. Philip Carey Mfg. Co., Cincinnati.

Dual - A - Fire — Gas-Oil Combination Burners and Furnaces. Automatic Firing Corp., St. Louis, Mo.

Dual-Clone—Blow Pipe Collectors. Day Co., Minneapolis.

Dual-Dials — Tank Gauge. Rochester Mfg. Co., Rochester, N. Y.

Dual-Matic—Gas-Oil Combination Burners. J. C. Junior Co., Kansas City, Mo.

Dubbleal — Sheeting. Masonite Corp., Chicago.

Duclean—Metal Cleaner. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

Duco—Enamels and Lacquers. E. I. du Pont de Nemours & Co., Wilmington, Del.

Ducon—Controls, Soldering Coppers. Dual Remote Control Co., Garden City, Mich.

Ductboard—Prefabricated Ducts. Sall Mountain Co., Chicago.

Ducti-Linx—Connectors, Tubing. Gray-Wilson Co., Detroit, Mich.

Duct Soundliner — Duct Insulation. Baldwin-Hill Company, Trenton, N. J.

Ducturne—Vanes. Tuttle & Bailey, Inc., New Britain, Conn.

Ductype — Blowers. South Bend Air Products, Inc., South Bend, Ind.

Dukrome—Metal Protecting Paint. E. I. DuPont de Nemours & Co., Wilmington, Del.

Dul-Kote—Sheets. Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Dulux—Enamels, Lacquers and Paints. E. I. du Pont de Nemours & Co., Wilmington, Del.

Duo-Gyrovane—Fans. Dual-Air Fan Corp., South Elgin, Ill.

Duo-Lock—Pittsburgh Lock Formers. Riverside Machinery Co., Minneapolis, Minn.

DuraBlit — Gravity Registers. Auer Register Co., Cleveland, Ohio.

Duracind—Water Heaters. A. O. Smith Corporation, Milwaukee.

Dura-Flex—Directional Flow Registers. Auer Register Co., Cleveland.

Duraflex—Stokers. Caston Stoker Corp., Canton, Ohio.

Dura-Line—Heating & Ventilating Registers. Auer Register Co., Cleveland.

Duralite — Refractory. Chicago Fire Brick Co., Chicago.

Duranite—Paint. Atlas Powder Co., North Chicago, Ill.

Dura-Sheen — Flues and Roof Jacks. Baltimore Porcelain Steel Corp., Baltimore, Md.

Durco—Ventilating Fans. Duriron Co., Inc., Dayton, Ohio.

Duridine—Chemical Cleaner. American Chemical Paint Co., Ambler, Pa.

Durimet 20—Stainless Steel Sheets. Duriron Co., Inc., Dayton, Ohio.

Durouze—Plates and Sheets. Bridgeport Brass Co., Bridgeport, Conn.

Dust Arrester—Dust and Lint Collectors. American Air Filter Co., Inc., Louisville.

Dustkop—Dust Collectors. Aget-Detroit Co., Ann Arbor, Mich.

DustStop — Filters. Owens - Corning Fiberglas Corp., Toledo, Ohio.

Dust-Trap — Filters. Morf Industries, Staten Island, N. Y.

Dutch Boy—Paint and Solder. National Lead Co., New York City.

Dux-Sulation — Duct Insulation. Grant Wilson, Inc., Chicago, Ill.

DynaBlow — Blowers and Fans. South Bend Air Products, Inc., South Bend, Ind.

Dynetric — Balancing Equipment. Gisholt Machine Co., Madison, Wis.

Dyno-Mite — Electric Drills. Millers Falls Co., Greenfield, Mass.

E

EFM—Burners, Furnaces, and Stokers. Electric Furnace-Man, Inc., Emmaus, Penn.

EM—Motors. Electric Machinery Mfg. Co., Minneapolis.

E-Z Arc—Arc Welders. Will-Weld Mfg. Co., Omaha, Nebr.

E-Z Dux—Fiberglas Duct Connections. St. Clair Rubber Co., Marysville, Mich.

E-Z-Hung—Eaves Trough and Gutters. Riggin Metal Products, Inc., Lansing, Mich.

E-Z-On—Damper Clips and Tips, Damper Regulators. M. A. Gerett Co., Milwaukee.

Eagle Mineral Wool—Insulation. Eagle-Picher Co., Cincinnati, O.

Eagle Star — Solder. Eagle-Picher Co., Cincinnati.

Eagle Super—Flashing. Eagle-Picher Co., Cincinnati, Ohio.

Eagle Super "66"—Furnace Insulation. Eagle-Picher Co., Cincinnati, O.

Eagle Supertemp — Duct Insulation. Eagle-Picher Co., Cincinnati, O.

Easternoil—Oil Burners. Eastern Oil & Equipment Co., Portland, Me.

Easy-Flo—Solder. Handy & Harman, New York, N. Y.

Easload—Hand Trunk. Colson Eq. & Supply Co., Los Angeles.

Easy-Slip—Eaves Trough and Gutters. La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.

Easyweld — Electrodes. Universal Welder Corporation, Cleveland, O.

E. C. Cord—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, O.

Echo—Ceiling Ventilators. Elgo Shutter & Mfg. Co., Detroit, Mich.

Eclipse — Gas Pressure Regulating Valves. Illinois Engineering Co., Chicago.

Econocel—Stokers. Cotta Transmission Corporation, Rockford, Ill.

Econo-miser—Oil Burners. Green Colonial Furnace Co., Des Moines, Iowa.

Economite—Gas Burners. Mid-Continent Metal Products Co., Chicago, Ill.

Economy — Power Hack Saws. F. L. Robertson, Buffalo, N. Y.

Economy—Furnaces, Heaters. International Heater Co., Utica, N. Y.

Economy—Gas Burners. H-P Products, Louisville, O.

Economy — Adjustable Buffing Hoods. Kirk & Blum Mfg. Co., Cincinnati, O.

Economy—Ventilators. Arex Company, Chicago, Ill.

Economy—Brakes, Squaring Shears. Acme Equipment Co., Inc., Chicago.

Economy—Water Heaters. Continental Water Heater Co., Los Angeles.

Edgecel—Filters. Wilson & Co., Inc., Chicago, Ill.

Effco — Ventilators. Hirschman-Pohle Co., LeRoy, N. Y.

Effco Louver—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

50—FWA—Utility Room Furnace. Fitzgibbons Boiler Co., Inc., New York, N. Y.

Elastic—Roof Cement. Philip Carey Mfg. Co., Cincinnati.

Elastikote—Paint. Tropical Paint & Oil Co., Cleveland, O.

Elasto-Rib—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.

Eleon—Stationary Louvers. Elgo Shutter & Mfg. Co., Detroit, Mich.

Electreat—Furnaces. Northwest Heating, Inc., Portland, Oreg.

Electric City—Gutter Forming Machines. F. L. Robertson, Buffalo, N. Y.

Electric Furnace—Fire Brick. Chicago Fire Brick Co., Chicago, Ill.

Electric Furnace Man—Domestic Stoker. General Machine Co., Inc., Emmaus, Pa.

Electric Janitor—Controls and Regulators. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Electric Piston—Draft Regulators. Hotstream Heater Co., Cleveland.

Electro - Cell — Filters. American Air Filter Co., Inc., Louisville, Ky.

Electroflo—Solenoid Valves. Hays Mfg. Co., Erie, Pa.

Electro-Flux-Silk — Soldering Flux. Lake Chemical Co., Chicago, Ill.

Electro Hot—Water Heaters. Red Spot Electric Co., Tacoma, Wash.

Electrolaire — Air Conditioning Furnaces. Electrol Burner Mfg. Co., Rutherford, N. J.

Electro-Matic — Filters. American Air Filter Co., Inc., Louisville, Ky.

Electro-Mist—Oil Mist and Smoke Collector. American Air Filter Co., Inc., Louisville, Ky.

Electro-PL—Filters. American Air Filter Co., Louisville, Ky.

Electro-Sheet—Roofing. American Brass Co., Waterbury, Conn.

Electro-Valve—Solenoid Valves. Sciaky Bros., Inc., Chicago.

Electro-Wind—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Electramite—Stainless Steel Tubing. Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.

Elgin — Pneumatic Hammers, Brazing Torches and Welders. Borm Mfg. Co., Elgin, Ill.

Elgin — Louvers and Shutters. Elgo Shutter & Mfg. Co., Detroit, Mich.

Elite — Gravity Registers. Auer Register Co., Cleveland, Ohio.

Elsco — Motors. Electric Sprayit Co., Sheboygan, Wis.

Elvanayre—Gas Burners. J. E. Van Tuyl & Associates, Cleveland.

EMC—Motors. Electric Motor Corp., Racine, Wis.

Empire—Mallets. Greene, Tweed & Co., Bronx, N. Y.

Empire—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Enameloid — Roofing Paint. Philip Carey Mfg. Co., Lockland, Ohio.

Endurance—Paint. Glidden Company, Cleveland, Ohio.

Enduro—Sheets. Republic Steel Corp., Cleveland, O.

Enpo—Motors. Piqua Machine & Mfg. Co., Piqua, O.

Epco—Perforated Metals. Erdle Perforating Co., Rochester, N. Y.

EPCO — Welding Timer. Electronic Products Co., Geneva, Ill.

Era — Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.

Era Hi-Air—Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.

Eroduct—Insulation. Ehret Magnesia Mfg. Co., Valley Forge, Pa.

Esco—Smoke Pipe Dampers. Eselgroth & Co., Newark, N. J.

Esico — Electric Soldering Coppers. Electric Soldering Iron Co., Inc., Deep River, Conn.

Eso—Furnaces, Oil Burners. Gilbert & Barker Mfg. Co., West Springfield, Mass.

Eternit—Non-Metallic Sheets. Ruberoid Co., New York, N. Y.

Eternium — Paint. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

EutecChrome — Electrodes and Welding Rod. Eutectic Welding Alloys Co., New York City.

Eutector—Flux. Eutectic Welding Alloys Co., New York City.

EutecRods — Welding Rods. Eutectic Welding Alloys Co., New York City.

EutecTrodes — Electrodes. Eutectic Welding Alloys Co., New York City.

Eveco—Barometric Draft Controls. Empire Ventilation Equipment Co., Long Island City, N. Y.

Even-Flo—Floor Furnaces. Air Products, Inc., Pittsburg, Kans.

Even-Temp—Furnaces. Northwest Metal Products, Inc., Seattle, Wash.

Everdur — Plates, Sheets, Electrodes, Welding Rod. American Brass Co., Waterbury, Conn.

Everedy—Oil Burners. Mt. Hawley Mfg. Co., Peoria, Ill.

Everjet — Roofing Paint. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Everlasting—Fastenings. H. M. Harper Co., Morton Grove, Ill.

Everplastic—Paint. H. H. Robertson Co., Pittsburgh.

Exidust — Dust Collectors. Allen Billmyre Div., Lamson Corp., Syracuse, N. Y.

Ex-L-Ite—Sheets. Republic Steel Corporation, Cleveland, Ohio.

F

F & E—Underfeed Stokers. Flynn & Emrich Co., Baltimore, Md.

FMD — Solder. Federated Metals Division, American Smelting and Refining Co., New York City.

Fabricote — Waterproofing. Wasco Flashing Co., Cambridge, Mass.

Fabrikated — Faces, Grilles, Registers. Independent Register Co., Cleveland, O.

Faceweld — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Fairweather — Blower - Washer Units. Furbio Company, Hermansville, Mich.

Falco—Sheets. Fairmont Aluminum Co., Fairmont, W. Va.

Far-Air—Evaporative Coolers, Filters. Farr Co., Los Angeles, Calif.

Farco—Soldering Flux. Farrelloy Company, Inc., Philadelphia, Pa.

Fargall—Soldering Flux. Farrelloy Co., Philadelphia.

Farquar—Furnaces. Farquhar Furnace Co., Wilmington, O.

Farsol—Soldering Flux. Farrelloy Co., Inc., Philadelphia.

Featherfin—Coils. L. J. Wing Mfg. Co., New York, N. Y.

Federal—Refractories. U. S. Stoneware Co., Akron, O.

F Electric — Fan Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Felt-Cote — Steel Roofing. American Steel Band Co., Pittsburgh, Pa.

Feltex—Roofing Felt. Philip Carey Co., Cincinnati.

Fenestra — Heat Insulating Windows. Detroit Steel Products Co., Detroit, Mich.

Fenn's Rotary—Roof Ventilators. Waverly Heating Supply Co., Boston, Mass.

Ferro—Soldering Flux. Linde Air Products Co., New York.

Ferrobord—Steel Roofing. Truscon Steel Co., Youngstown, O.

Ferroglas—Building Insulation. Truscon Steel Co., Youngstown, O.

Ferro - Therm — Reflective Insulation. American Flange & Mfg. Co., Inc., New York City.

Ferroweld — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Fibercote — Roofing Paint. Midland Paint & Varnish Co., Cleveland.

Fiberglas — Insulation. Owens-Corning Fiberglas Corp., Toledo, O.

Fiberkote — Roofing Cement. National Manufacturing Corp., Tonawanda, N. Y.

Fiberock—Roofing Felt. Philip Carey Mfg. Co., Cincinnati.

Fibre Coating—Roofing Paint. Philip Carey Mfg. Co., Lockland, Ohio.

Fibronized — Plastic Tubing. Irvington Varnish & Insulator Co., Irvington, N. J.

Filtered Aire — Blower-Filters. American Foundry & Furnace Co., Bloomington, Ill.

Filterpure — Coils. Betz Corporation, Hammond, Ind.

Fil-thru—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.

Findlay — Stokers. Central Rubber & Steel Corporation, Findlay, Ohio.

Fin-Flex—Directional Flow Registers. The Auer Register Co., Cleveland, O.

Finn-Tenee — Conversion Gas Burner. Jerry Finn Engineers, St. Paul.

Firebox — Combustion Chambers. Sid Harvey, Inc., Valley Stream, N. Y.

Fire Boy—Conversion Burners. Moore Equipment Co., Lincoln, Nebr.

Fire Chief—Oil Burners. Coal-O-Matic Co., Trucksville, Penn.

Fibercote — Roofing Paint. Midland Paint & Varnish Co., Cleveland.

Fire-Crest—Conversion Burners. Modern Controls Corp., Detroit, Mich.

Firecrete — Refractories. Johns-Manville, New York, N. Y.

Fire-Hearth — Castable Refractories. Fireline Stove & Furnace Lining Co., Chicago, Ill.

Firelite — Cement. Johns-Manville, New York, N. Y.

Fireline—Furnace Firepot Lining. Fireline Stove & Furnace Lining Co., Chicago.

Firelite—Refractories. Fireline Stove & Furnace Lining Co., Chicago.

Fire Tender—Stokers. Holcomb & Hoke Mfg. Co., Indianapolis, Ind.

Firma — Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Firomatic—Gas Pressure Valves, Safety Devices. Morse-Smith-Morse, Inc., Watertown, Mass.

Fitrite—Conductor, Eaves Trough and Gutter Fittings and Accessories, Skylight Lifts, Snow Guards. David Levow, or Rival Strap Corp., New York, N. Y.

Fixit — Cement. National Mfg. Corp., Tonawanda, N. Y.

Flame Control—Oil Burners. Richfield Mfg. Corp., Baldwin, L. I., N. Y.

Flame-Otrol — Controls. Wheelco Instruments Company, Chicago.

Flashing—Roof Cement. Waterproofing. Philip Carey Mfg. Co., Cincinnati.

Flash-Off No. 90 — Industrial Finish. Acme White Lead & Color Works, Detroit, Mich.

Flash-Rite—Flashing. Figge Co., Chicago.

Flatpak — Prefabricated Aluminum Ducts, Fittings. Viking Manufacturing Corp., Cleveland.

Flat-Top—Roofing. Globe Iron Roofing & Corrugating Co., Newport, Ky.

Fleet Arc—Arc Welders. Lincoln Electric Co., Cleveland, Ohio.

Fleetweld — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Fleur de Lis—Conductor Heads and Fittings. Royal-Apex Mfg. Corp., Brooklyn, N. Y.

Flexarc—Arc Welders. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Flexaust—Hose. American Ventilating Hose Co., New York City.

Flexibine — Paint. Samuel Cabot, Inc., Boston, Mass.

Flexi-Flow—Pressure Blowers. Moore Co., Marceline, Mo.

Flextop—Roofing Paint. Philip Carey Mfg. Co., Lockland, O.

Flex-Tube—Draft Gauges. F. W. Dwyer Mfg. Co., Chicago, Ill.

Flint—Gas Burners. Roberts Manufacturing Co., Flint, Mich.

Flo-Co—Furnaces. Floral City Heater Co., Monroe, Mich.

FloRite—Air Velocity Meters. Bacharach Industrial Instrument Co., Pittsburgh, Penn.

Florite Desiccant—Dehumidifier. Floridin Co., Warren, Pa.

Flosol — Soldering Flux. American Chemical Paint Co., Ambler, Pa.

Flo-Warm—Coal, Oil, Gas and Stoker-Fired Furnaces. Williamson Heater Co., Cincinnati, O.

Finalyzer—Portable CO_2 Analyzer. Chas. Englehard, Inc., East Newark, N. J.

Flurrseal — Waterproofing. American Fluresit Co., Cincinnati, Ohio.

Flurretex — Waterproofing. American Fluresit Co., Cincinnati, Ohio.

Fluxrite—Flux. National Lead Co., New York City.

Flux-Stik—Soldering Flux. Lake Chemical Company, Chicago.

Foamglas—Insulation. Pittsburgh Plate Glass Co., Pittsburgh, and Pittsburgh Corning Corporation, Pittsburgh.

Follansbee—Furnace Pipe. Sheet Metal Specialty Div., Follansbee Steel Corp., Pittsburgh, Pa.

Fontabest—Floor Furnaces. Sunshine Mantle Co., Chanute, Kans.

Forbes Syphonaire—Ventilators. Western Engineering & Mfg. Co., Los Angeles, Calif.

Ford's Black Metal—Metal Protecting Paint. Ford Roofing Products Co., Chicago.

Ford - V - Neer — Building Insulation. Ford Roofing Products Co., Chicago, Ill.

Fosco Standard—Water Heaters. F. O. Schoedinger, Columbus, Ohio.

Fosco Thermoray—Gas Space Heaters. F. O. Schoedinger, Columbus, Ohio.

Foundation Coating — Waterproofing. Glidden Co., Cleveland, O.

4-Way-Flow—Registers. U. S. Register Co., Battle Creek, Mich.

Fracto - Crete — Castable Refractory. Ramtite Co., Chicago.

Franalite—Enamels and Lacquers. Hilo Varnish Corp., Brooklyn, N. Y.

Free-Aire — Air Conditioning Units, Furnaces, Heaters. Kehm Corporation, Chicago.

Free Flow—Ventilators. Burt Mfg. Co., Akron, O.

Freeman—Stokers. Illinois Iron & Bolt Co., Chicago, Ill.

Fresh-Air Maker — Fans, Ventilators. Schwitzer-Cummins Co., Indianapolis.

Frigid—Night Air Cooling and Exhaust Fans, Fan Blades, Housings. Circulators & Devices Mfg. Corp., New York, N. Y.

Fros-T-aire — Air Conditioning Units. Palmer Manufacturing Corp., Phoenix, Arizona.

Frost-O-Lite—Paint. Sanvin Chemical Products Co., Moline, Ill.

Fuelatrol—Oil Burners, Furnaces and Stokers. Premium Coal & Oil Co., Cincinnati, Ohio.

Fuel-Saver—Automatic Draft Regulator. Walker Mfg. & Sales Corp., St. Joseph, Mo.

Fuel-Tone—Oil Burner Tank Solvent. Radiator Specialty Co., Charlotte, N. C.

Fueltone — Oil Tank Solvent. Amplon Corporation, Long Island City.

Fulflo — Fuel Oil Filter. Commercial Filters Corp., Boston.

Fulscope—Controls. Taylor Instrument Companies, Rochester, N. Y.

Fulton—Register Shield. Patent Novelty Co., Fulton, Ill.

Furnacestat — Control. Minneapolis-Honeywell Regulator Co., Minneapolis.

Fuscair — Diffusers. Aladdin Heating Corp., Oakland, Calif.

Fyre-Mortar—Insulating Cement. Quigley Company, Inc., New York, N. Y.

Fyr-Feeder — Stokers. American Coal Burner Company, Chicago, Ill.

Fyrite—CO_2 Analyzers. Bacharach Industrial Instrument Co., Pittsburgh.

Fyr-Fly—Oil Burners. Breeze Corporations, Inc., Newark, N. J.

G

G. B. C.—Blowers and Fans, Motors. General Blower Co., Inc., Philadelphia, Penn.

G/C — Controls. General Controls Co., Glendale, Calif.

G-E—Air Conditioning Units, Oil Burners, Compressors, Controls, Soldering Coppers, Couplings, Electrodes, Fans, Flux, Furnaces, Humidistats, Motors, Relays, Switches, Transformers, Solenoid Valves, Thermostats, Welders. General Electric Co., Bloomfield, N. J., and Schenectady, N. Y.

G - E - Germicidal — Sterilizing Lamps. General Electric Co., Cleveland.

G-R — Welders. Glenn-Roberts Company, Oakland, Calif.

Galbestos—Roofing. H. H. Robertson Co., Pittsburgh.

Galeogage—Oil Tank Gauge. Applied Mechanics Co., Boston.

Galvaprep—Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.

Galv-Kote — Zinc Paint. Galv-Weld Products, Dayton, O.

Galv - O - Zinc — Coating, Paint. Blue Ridge Talc Co., Inc., Henry, Va.

Gas-a-Fire—Gas Conversion Burners, Gas Furnaces. Autosatic Firing Corporation, St. Louis, Mo.

Gas Economy—Furnaces. International Heater Co., Utica, N. Y.

Gasmaster—Conversion Burners and Furnaces. Twin City Gas Specialty Co., Minneapolis, Minn.

Gas Miser—Furnaces. Floral City Heater Co., Monroe, Mich.

Gastite — Furnaces. Waterman-Waterbury Co., Minneapolis, Minn.

Gas-Vac—Furnaces, Heaters. Vacuum Gas Appliances, Rome, N. Y.

Gasweld—Soldering Coppers, Torches, and Welding Equipment. Wall Chemicals Div., Liquid Carbonic Corp., Chicago.

Gehl—Stokers. Eddy Stoker Corp., Chicago, Ill.

Gemaco—Compressors. General Machinery Co., Spokane, Wash.

Gemaco—Oil Burners. General Machine Co., Inc., Emmaus, Pa.

Gemco—Air Conditioner. General Engineering & Mfg. Co., St. Louis, Mo.

Gemware — Hygrometers. Psychrometers, Thermometers. G. M. Mfg. Co., New York, N. Y.

General — Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.

Genico—Oil Burners. General Oil Heating Corp., West New York, N. J.

Germicidal — Sterilizing Lamp. General Electric Co., Cleveland.

Gerotor — Fuel Oil Pump. May Oil Burner Div., Gerotor May Corp., Baltimore.

Giant — Oil Burners. Breeze Corporations, Inc., Newark, N. J.

Gibraltar—Furnace and Heaters. Ma-Girl Foundry & Furnace Co., Bloomington, Ill.

Gignatic Junior—Water Heaters. M & K Water Heater Co., Culver City, Calif., and Diamond Agencies, Pasadena, Calif.

Gil—Valves. Gas & Oil Industry Laboratories, Inc., Irvington, N. J.

Gilberco—Furnaces, Oil Burners. Gilbert & Barker Mfg. Co., West Springfield, Mass.

Gilbert—Combustion Chambers. R. Rehm, St. Albans, N. Y.

Gilco—Water Heaters. J. L. Gilleo Co., Dowagiac, Mich.

Gil Ho-Hame—Valves. Gas & Oil Industry Laboratories, Inc., Irvington, N. J.

Gilsulume—Paint. United Gilsonite Laboratories, Scranton, Pa.

Gilt Edge—Furnaces and Stokers. Schwab Furnace Co., Milwaukee, Wis.

Gipsy—Circulating Gas Heaters. Independence Stove & Furnace Co., Independence, Mo.

Gladiator—Water Heaters. Continental Water Heater Co., Los Angeles.

Glasfab—Roofing Felt. Lexington Supply Co., Cleveland, Ohio.

Glaseln—Caulking Compounds. Nobel Mfg. Co., Cleveland.

Globe—Sheets. Newport Rolling Mill Co., Newport, Ky.

Globe Steeler—Hot Water Coils. Globe Machinery & Supply Co., Des Moines, Ia.

Glo-Coke — Gas Burners. Geisel Mfg., Inc., Elyria, O.

Glo-Fyr—Oil Burners. Breeze Corporations, Inc., Newark, N. J.

Glowax—Gas Burners. J. O. Martin Co., Inc., San Francisco, Calif.

Gnome—Oil Burners. Breeze Corporations, Inc., Newark, N. J.

Gohl — Eaves Trough & Gutters, Pipe, Ridge Rolls and Ridging, Roofing. Globe Iron Roofing & Corrugating Co., Newport, Ky.

Gohl—Sheets. Newport Rolling Mill Co., Newport, Ky.

Gold Bond—Insulation Board, Tile. National Gypsum Co., Buffalo, N. Y.

Gold Bond-Gimco — Rock Wool Products, Insulating Cement. National Gypsum Co., Buffalo, N. Y.

Gopher—Furnaces and Heaters. American Gas Machine Co., Albert Lea, Minn.

Gordon Spreader-Flame—Gas and Gas-Oil Burners and Furnaces. Roberts-Gordon Appliance Corp., Buffalo, N. Y.

Grad-U-Flow—Registers. Minneapolis-Honeywell Regulator Co., Minneapolis.

Gradutrol — Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Grand Rapids—Furnace Cleaner. Doyle Vacuum Cleaner Co., Grand Rapids, Mich.

Granodine—Coating Process. American Chemical Paint Co., Ambler, Pa.

Graylite—Building and Duct Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Greastop — Filters. Air-Maze Corporation, Cleveland, O.

Grid—Air Washers, Heating and Cooling Coils. D. J. Murray Mfg. Co., Wausau, Wis.

Grillometer—Direct Reading Air Velocity Meter. Detroit Air Conditioning Service Co., Inc., Detroit, Mich.

Gun-Grip — Electric Soldering Iron. Lenk Mfg. Company, Boston.

H

H & B Castable—Refractories. Walsh Refractories Corp., St. Louis, Mo.

H&C—Furnace Chain, Damper Clips, Dampers, Ceiling Ventilators, and Registers. Hart & Cooley Mfg. Co., Holland, Mich.

H & K—Perforated Metals. Harrington & King Perforating Co., Chicago, Ill.

H & M—Gas Burners. Hook & Miller, Pittsburgh.

H-B—Gas Conversion Burner. Handley Brown Heater Co., Jackson, Mich.

H-M—Gas Pressure Regulating Valves. Thermac Co., Los Angeles.

Hacker—Blowers, Furnaces. Standard Heating Equipment Co., Waterloo, Ia.

Hair Glass—Filters. H. J. Somers, Inc., Detroit, Mich.

Hallmark—Furnaces. Heating Specialties Co., Baltimore, Md.

Hammerkraft—Enamels and Lacquers. Hilo Varnish Corp., Brooklyn, N. Y.

Hammer-Sets—Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.

Handicad—Lead Roofing Sheets. National Lead Co., New York, N. Y.

Handnib—Punches. National Machine Tool Co., Racine, Wis.

Handy—Pipe, Prefabricated Ducts and Fittings. F. Meyer & Bro. Co., Peoria, Ill.

Handy-Flux—Soldering Flux. Handy & Harman, New York, N. Y.

Happy Thought — Heaters. Pittston Stove Co., Pittston, Pa.

Hardlead—Lead Roofing. National Lead Co., New York.

Hardweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Hart—Oil Burners. Avery Farm Machinery Co., Peoria, Ill.

Hartford-Lincoln—Shear. Lincoln Machine Co., Boston.

Hart-Heat—Furnaces. Avery Farm Machinery Co., Peoria, Ill.

Hartman—Ozone Apparatus. Norwood Filtration Company, Holyoke, Mass.

Hayle — Heaters. McCulloch Motors Corp., Los Angeles.

Health-aire—Blowers, Coils, Fans, Louvers, Shutters and Ventilators. Johnson Fan & Blower Corp., Chicago.

Hearth-Glo — Space Heaters. Jackes-Evans Mfg. Co., St. Louis.

Heat-Aid — Furnace Linings. Pyrolite Products Co., Cleveland, Ohio.

Heatane — Liquid Petroleum Water Heaters. Hoyt Heater Co., Los Angeles.

Heat Breaker—Fans. Warren Earl Company, Houston, Tex.

Heat Holder—Baffles. Sid Harvey, Inc., Valley Stream, N. Y.

Heatmaster — Oil Burners. Cooper & Cooper, Inc., Pittsfield, Mass.

Heatmaster—Floor Furnaces. Universal Metal Products, Alhambra, Calif.

Heat-O-Meter—Controls. Miller-Harris Instrument Co., Milwaukee.

Heat-Pak—Oil Burners. Breese Corporations, Inc., Newark, N. J.

Heat-Pak—Oil Burners. Aldrich Co., Wyoming, Ill.

Heat Reclaimer—Booster Fans. C. L. Rayfield Co., Chicago, Ill.

Heatrem—Aluminum Paint. Speco, Inc., Cleveland, Ohio.

Heat-Rite — Gravity Registers. Auer Register Co., Cleveland, O.

Heatrola — Heaters. Estate Heatrola Div., Noma Electric Corp., Hamilton, Ohio.

Heat Seal—Insulation. Ehret Magnesia Mfg. Co., Valley Forge, Pa.

Heatwell—Gas Burners. Maxwell-Heatwell Co., Denver, Colo.

Heavyduty—Damper Quadrants. Parker-Kalon Corp., New York, N. Y.

Heco—Pulleys, Valves, Heckethorn Mfg. & Supply Co., Littleton, Colo.

Heet-Master—Kettles. Aeroil Products Co., Inc., South Hackensack, N. J.

Hellite — Refractories. Johns-Manville, New York.

Helyx—Drive Screws, Nails. Hillwood Manufacturing Co., Cleveland, O.

Herco — Welders, Transformers. Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.

Hercules—Snips and Shears. Merchandising and Manufacturing Associates, Inc., Lancaster, Penn.

Heresite—Pipe and Fittings. Heremetal Co., Minneapolis, Minn.

Hermetic—Furnaces. Favorite Mfg. Co., Piqua, Ohio.

Hev-E-Oil — Oil Burners. Cleaver-Brooks Company, Milwaukee.

Hevy-Duty—Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.

Hiawatha—Bearings. Ideal Products Co., Oshkosh, Wis.

HiBoy—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.

Hicycle—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.

Hi-Degree — Paint. Cheesman-Elliot Company, Inc., Brooklyn.

Hi-Duty—Copper Tube Fittings. Imperial Brass Mfg. Co., Chicago, Ill.

Hi-Duty—Water Heaters. Fauce Hot Heater Co., LaPorte, Ind.

Hi-Duty—Combustion Chambers. Monogram Products Co., Philadelphia, Penn.

High-Duty—Valves. Maid-O'-Mist, Inc., Chicago.

Highway — Copper Iron. Apollo Steel Co., Apollo, Pa.

Hi Heat—Gas Burners. Hansen Electric Co., San Francisco.

Hi-Heat Gray — Paint. Wallss Dove-Herminston Corporation, Westfield, N. J.

Hilume—Aluminum Paint. Hilo Varnish Corp., Brooklyn, N. Y.

Hi-Power — Buffers, Grinders, Drills Portable Electric Tools, Inc., Chicago.

Hi-Speed—Electric Dimpler. York Electric Tool Co., York, Pa.

Hi-Speed—Nibbler, Slitter, and Shears. Libert Machine Co., Green Bay, Wis.

Hi-Speed—Welding and Cutting Apparatus. Dockson Corporation, Detroit.

Hi-Spra—Spray Nozzles. Thermal Industries, Indio, Calif.

Hi-Steel—Alloy Steel. Inland Steel Co., Chicago.

High - Ten - No. 500 — Flux. Industrial Service Laboratories, Milwaukee, Wis.

Hi-Test—Water Heaters. Hoyt Heater Co., Los Angeles.

Hoffman — Water Heaters. Clayton & Lambert Mfg. Co., Louisville.

Hold Heat—Soldering Coppers. Turner Brass Works, Sycamore, Ill.

Hol-grip—Electrode Holders. Tweco Products Co., Wichita, Kans.

Holgun—Portable Electric Drills. Black & Decker Mfg. Co., Towson, Md.

Holgun—Portable Electric Drills. Van Dorn Electric Tool Co., Towson, Md.

Holly Glen—Water Heaters. Hollywood Water Heater Co., Los Angeles, Calif.

Holtite—Screws. Continental Screw Co., New Bedford, Mass.

Home Comfort—Blowers, Furnaces. St. Louis Furnace Mfg. Co., St. Louis, Mo.

Honeycomb—Air Filters. Wilson & Co., Inc., Chicago, Ill.

Hornebleude — Metal Protecting Paint, Compounds. North American Fibre Products Co., Cleveland, Ohio.

Hornlume—Roofing Paint. A. C. Horn Company, Long Island City, N. Y.

Horn-O-Tone—Paint. A. C. Horn Co., Inc., Long Island City, N. Y.

Hostess—Storage Water Heaters. Luxra Co., Atchison, Kans.

Hot Blast—Furnaces and Heaters. Cole Hot Blast Mfg. Co., Chicago, Ill.

Hot Blast — Furnace Cement. Philip Carey Mfg. Co., Cincinnati.

Hot Blast — Soldering Furnaces and Torches. Turner Brass Works, Sycamore, Ill.

Hotco—Furnaces. Oil Burners. Hotentot Co., Inc., Omaha, Nebr.

Hot Spot—Electric Welders. Acme Electric Welder Co., Los Angeles, Calif.

Houston—Gas Heaters. Houston Blow Pipe & Sheet Metal Works, Houston, Texas.

Howie — Heat Savers. Condensation Engineering Corp., Chicago, Ill.

Huber—Overfeed Stokers. Flynn & Emrich Co., Baltimore, Md.

Humicleau—Cleaning Compound. Carolina Aniline & Extract Co., Charlotte, N. C.

Humidair—Humidifiers. Skilbeck Mfg. Co., Kenosha, Wis.

Humidair—Washers. American Foundry & Furnace Co., Bloomington, Ill.

Humid-Aire—Humidifiers. Meyer Furnace Co., Peoria, Ill.

Humidigraph — Hygrometers. Bristol Company, Waterbury, Conn.

Humidiguide—Humidistats. Taylor Instrument Companies, Rochester, N. Y.

Humidostat — Humidistats. Johnson Service Co., Milwaukee, Wis.

Humid-o-stat—Humidistat. Minneapolis-Honeywell Regulator Co., Minneapolis.

Humphrey — Furnaces and Heaters. General Gas Light Co., Kalamazoo, Mich.

Husky-Lite — Combination Machines. Maplewood Machinery Co., Chicago.

Hy-Boy—Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Hydrometer — Gas Regulating Valve. General Controls Co., Glendale, Calif.

Hydraulic - Action — Controls. White-Rodgers Electric Co., St. Louis, Mo.

Hydrocide—Waterproofing. L. Sonneborn Sons., Inc., New York, N. Y.

Hydro-Whirl—Dust Collectors. Peters-Dalton, Inc., Detroit, Mich.

Hy-Duty—Blowers, Wheels. Schwitzer-Cummins Co., Indianapolis, Ind.

Hy-Power—Snips and Shears. Wiss & Sons Co., J., Newark, N. J.

Hyspar — Roof Cement, Compounds, Paint. Midland Paint & Varnish Co., Cleveland, O.

Hy-Speed — Hydraulic Tools. Munton Manufacturing Co., Franklin Park, Ill.

Hytemplite—Furnace Cement. Quigley Company, Inc., New York, N. Y.

I

IEC—Relays, Switches. Industrial Engineering Corp., Terre Haute, Ind.

Ideal — Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.

Ideal—Oil Burner Fittings. Boston Machine Works Co., Lynn, Mass.

Ideal—Pipe and Fittings, Riggin Metal Products, Inc., Kankakee, Ill.

Ideal — Roofing Nails. Tennessee Coal Iron & Railroad Co., Birmingham, Ala.

Ideal—Insulation. Hinde & Dauch Paper Co., Sandusky, Ohio.

Ilgair — Fans. Ilg Electric Ventilating Co., Chicago, Ill.

Ilgette—Kitchen Exhaust Fans. Ilg Electric Ventilating Co., Chicago, Ill.

Illbronze—Aluminum Paste and Powder. Illinois Bronze Powder Co., Inc., Chicago.

Immersatherm — Domestic Hot Water Supply Control. Mercoid Corp., Chicago.

Immersion Automatic—Water Heaters. Sellers Engineering Co., Chicago.

Impact—Spray Nozzles. Phillips Cooling Tower Co., Inc., New York, N. Y.

Imperial—Evaporative Coolers. International Metal Products Co., Phoenix, Ariz.

Imperial—Pillow Blocks. Anti-Friction Bearings Co., Los Angeles.

Incinor—Gas-fired Incinerators. Bowser, Inc., Incineration Div., Cairo, Ill.

Inco — Paint. Inter-Coastal Paint Co., East St. Louis, Ill.

Inconel—Alloy Plates, Sheet, Tubing, Electrodes. International Nickel Company, Inc., New York, N. Y.

Independent—Furnaces, Heaters. Independence Stove & Furnace Co., Independence, Mo.

Indian—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.

Indoor-Outdoor—Thermostats. White-Rodgers Electric Co., St. Louis, Mo.

IngActad—Plates and Sheets. Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.

Ingels — Elbow Machine. Maplewood Machinery Co., Chicago.

Inkstop—Filters. Air-Maze Corporation, Cleveland, Ohio.

In-Quik — Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.

Insa-Lute—Insulating Cement. Sauereisen Cements Co., Pittsburgh, Pa.

Ins-Lite—Building and Duct Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Instant-Glo—Combustion Chambers. Boston Machine Works Co., Lynn, Mass.

Insulag—Insulation and Insulating Cement. Quigley Co., Inc., New York, N. Y.

Insulate - Windows — Heat Insulating Windows. Chamberlin Company of America, Detroit.

Insulbrick — Insulation. Quigley Co., Inc., New York, N. Y.

Insulcrete — Insulation. Quigley Co., Inc., New York, N. Y.

Insulfil—Insulation. Refractory & Insulation Corp., New York, N. Y.

Insulmat—Insulation. J. W. Mortell Co., Kankakee, Ill.

Interlox—Plastic Tee. Extruded Plastics, Inc., Norwalk, Conn.

Inter-Matic—Time Switches. International Register Co., Chicago.

Ironhide—Paint. Pittsburgh Plate Glass Co., Pittsburgh.

Ironset — Asbestos Furnace Cement. Fireline Stove & Furnace Lining Co., Chicago, Ill.

Irpo—Rust-Proofing. Wolfe-Kote Co., Sheboygan, Wis.

Isle City—Registers. Rock Island Register Co., Rock Island, Ill.

Isomode — Pads. MB Manufacturing Company, Inc., New Haven, Conn.

Ivanhoe—Heaters. Perfection Stove Co., Inc., Cleveland, O.

IVCO — Ventilators. Iona Ventilator Company, Inc., Philadelphia.

J

J & C—Blower-Filter Units and Furnaces. Jackson & Church Co., Saginaw, Mich.

JFS — Transmissions. Stephens-Adamson Mfg. Co., Aurora, Ill.

JK—Bar Benders. James Knights Co., Sandwich, Ill.

J-M—Insulation, Roofing. Johns-Manville, New York, N. Y.

JU—Oil Burners. Aldrich Co., Wyoming, Ill.

Jo-Nar—Metal Radiator Covers. W. J. Savage Co., Knoxville 2, Tenn.

Janitrol — A. C. Units, Gas Burners, Furnaces, Surface Combustion, Toledo, Ohio.

Jarvis — Gas Heaters. Feathertouch Products, Inc., Los Angeles.

Ject-O-Valve — Ventilators. Swartwout Co., Cleveland.

Jetronic—Floor Furnaces, Heaters. Consolidated Industries, Inc., Lafayette, Ind.

Jiffy — Regulator Set. Parker-Kalon Corp., New York, N. Y.

Jiffy—Roof Flashing. Simplex Manufacturing Company, Fond du Lac, Wis.

Joinflite—Insulation. Mundet Cork Corporation, North Bergen, N. J.

Jumbo—Oil Burners. Breeze Corporations, Inc., Newark, N. J.

Juno-Aire—Furnaces. American Foundry & Furn. Co., Bloomington, Ill.

Juniata—Soldering Flux. Geo. W. Diener Mfg. Co., Chicago, Ill.

Junior — Water Heaters. Fauco Hot Heater Co., LaPorte, Ind.

Junior—Water Heaters. SuperbO Mfg. Co., Los Angeles.

JusRite—Ducts, Dampers, Duct Connectors, Fittings. Corbman Bros., Inc., Philadelphia, Pa.

JusRite L-Bo—Furnace Pipe and Fittings. Corbman Bros., Inc., Philadelphia.

K

K & M Duplex—Insulation. Keasbey & Mattison Co., Ambler, Pa.

K&M Hy-Temp—Insulation. Keasbey & Mattison Co., Ambler, Pa.

K&M Simplex—Insulation. Keasbey & Mattison Co., Ambler, Pa.

K-B—Damper Clips, Tips and Regulator Sets. G. L. Kerentoff, Cincinnati, Ohio.

KCB—Sheets. Newport Rolling Mill Co., Newport, Ky.

KCB—Eaves Trough and Gutters, Pipe, Ridge Rolls and Ridging, Roofing. Globe Iron Roofing & Corrugating Co., Newport, Ky.

KO — Hoists. Stephens - Adamson Mfg. Co., Aurora, Ill.

KRW—Press Brake. K. R. Wilson, Buffalo.

K.S.V.—Ventilators. Kernchen Co., Chicago, Ill.

KX-99—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Kant Krush — Roof Strainers. Grand Rapids Wire Products Co., Grand Rapids, Mich.

Kant-Mar—Mallets. Schmidgall Products, Peoria, Ill.

Kasson—Motors. General Die & Stamping Co., New York City.

Kastite—Castable Refractory. Chicago Fire Brick Co., Chicago.

Kathabar—A. C. Units. Dehumidifiers. Surface Combustion Corp., Toledo, O.

Kaukit—Caulking Compound. L. Sonneborn Sons, Inc., New York, N. Y.

Keldur — Vibration Isolators. Hobelte Products Co., Paterson, N. J.

Kelsey - Bradley — Furnaces. Kelsey Heating Co., Inc., Syracuse, N. Y.

Kenwood — Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Keystone — Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.

Keystone—Water Heaters. Crane Co., Chicago, Ill.

Kimsul — Insulation. Kimberly - Clark Corp., Neenah, Wis.

King Gauge—Tank Gauge. Oil Eq. Mfg. Co., New Haven, Conn.

Kirksite—Plates. Monarch Alloys, Ravenna, Ohio.

Kirkson—Flux, Sheet Holder. Morris P. Kirk & Son, Los Angeles.

Kitchen - Aire — Kitchen Ventilators. Stewart Manufacturing Co., Indianapolis, Ind.

Kitchencer—Water Heaters. Horn-Sullivan Co., San Francisco.

Kitch - N - Venter — Fans. Universal Blower Company, Birmingham, Mich.

Kleen-Aire—Furnaces. Steel City Furnace Co., Pittsburgh, Penn.

Kleenflo — Filters. Air-Maze Corp. Cleveland, O.

Kleenit—Oil Burner Tank Solvent. Red Wing Oil Burner Co., Inc., Chelsea, Mass.

Kleanmaster—Furnace Vacuum Cleaners. Molloy Sales Corp., Chicago, Ill.

Klee-Sealant—Caulking Compound. American Flurosil Co., Cincinnati, Ohio.

Klenk's—Snips. W. H. Compton Shear Co., Newark, N. J.

Klixon—Controls, Thermostats. Spencer Thermostat Co., Attleboro, Mass.

Klondike—Welders. Ralph Fern, Scranton, Pa.

Kload—Motors. Sterling Electric Motors, Inc., Los Angeles.

Knock - Out — Arc Welders, Torches, Buffers, Grinders, Polishers and Sanders. K. O. Lee & Son Co., Aberdeen, S. D.

Kno-Draft — High Velocity Air Diffusers. W. B. Connor Eng. Corp., New York, N. Y.

Kobler — Crimping Machine. Ingram Machinery Co., Picher, Okla.

Kokote—Wire. Continental Steel Corporation, Kokomo, Ind.

Kolbkast—Combustion Chambers. A. R. Webber Co., Inc., New Haven, Conn.

Kold-Aire—Air Conditioning Units. U. S. Air Conditioning Corp., Minneapolis, Minn.

Kolorplus—Nails. Independent Nail & Packing Co., Bridgewater, Mass.

Kolstoker — Stokers. Anchor Stove & Range Co., New Albany, Ind.

Kompo - Kork — Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.

Konductor — Fasteners. Friedley-Voshardt Co., Chicago.

Konik—Sheets and Wire. Continental Steel Corporation, Kokomo, Ind.

Kooler-Aire — Air Conditioning Units. U. S. Air Conditioning Corp., Minneapolis, Minn.

Koolshade—Sun Reflecting Screens. Ingersoll Steel Div., Borg-Warner Corp., Chicago.

Koppax—Paint. Koppers Co., Inc., Pittsburgh, Pa.

Kopro-C.P.-15 — Roof Cement. Philip Carey Mfg. Co., Cincinnati.

Korozal—Plastic. B. F. Goodrich Co., Akron, O.

Krack—Air Conditioning Units, Coils, Refrigeration Appliances, Inc., Chicago.

Kres-Kus Perco-Flash—Water Heaters. Kreseno-Stamm Co., New York City.

Kristokrak — Enamels and Lacquers. Atlas Powder Co., North Chicago, Ill.

Krome - Kote — Welding Compound. Wolfe-Kote Co., Sheboygan, Wis.

Krustite—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Kwik-Melter—Roofers' Kettles. Littleford Bros., Inc., Cincinnati.

Kwik-Way—Damper Regulators. Hart & Cooley Manufacturing Co., Holland, Mich.

L

L. A.—Motors. Louis Allis Co., Milwaukee, Wis.

L & N—Thermometers. Leeds & Northrup Co., Philadelphia, Pa.

L & R—Conductor Pipe. Lamb & Ritchie Co., Cambridge, Mass.

L-M — Tubing. Lewin - Mathes Co., St. Louis, Mo.

L-U—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

L-Blow — Exhausters, Ventilators. Trade-Wind Motorfans, Inc., Los Angeles.

Laeq — Lacquers. Glidden Company, Cleveland, O.

Laetile — Roofing Felt. Philip Carey Mfg. Co., Cincinnati.

Lad-E-Vator—Hoist. Campbell Equipment Co., Chicago, Ill.

Lamneck—Ducts and Duct Fittings, Pipe. Clayton & Lambert Mfg. Co., Louisville, Ky.

Lanesl—Stainless Steel Soldering Flux. F. H. Langeenkamp Co., Indianapolis, Ind.

Larco—Mineral Paste. Western Mineral Products Co., Omaha, Nebr.

Larkweld — Welders. Larkin Lectro Products Co., New York City.

Lassen—Water Heaters. Dalco Appliance Co., San Francisco.

Lastile—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.

Latest—Skylight Lifts. Danzer Metal Works Co., Hagerstown, Md.

Lawson—Heaters. United States Stove Co., South Pittsburg, Tenn.

Leader — Burners, Furnaces. Berger Furnace Mfg. Co., Pittsburgh, Penn.

Leader — Oil Burners and Circulating Heaters. Victor Oil Burner Mfg. Co., Hartford, Conn.

Lead-Head—Nails. W. H. Maze Co., Peru, Ill.

Lead-Seal—Roofing Nails. The Deniston Co., Chicago, Ill.

Leastoker—Stokers. H. Leslie Less Co., Monona, Ia.

Leadtex—Lead-Coated Sheets. Revere Copper and Brass Incorporated, New York, N. Y.

Lectrodryer—Dehumidifier. Pittsburgh, Lectrodryer Corp., Pittsburgh.

Lectro-Glo—Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Lehigh — Furnaces, Heaters. Pittston Stove Co., Pittston, Pa.

Leigh—Shutters, Ventilators. Air Control Products, Inc., Coopersville, Mich.

Leonard—Circulating Oil Heater. W. R. Ames Co., San Francisco, Calif.

LeRoy—Fan and Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Leslie Louvers—Roof Ventilators, Stationary Louvers. Leslie Welding Co., Chicago, Ill.

Levelometer—Liquid Level Gauge. Liquidometer Corp., Long Island City.

Level-Temp — Thermostats. White-Rodgers Electric Co., St. Louis, Mo.

Lexanco—Drive Clips and Roofing Paint. Lexington Supply Co., Cleveland, Ohio.

Liberty—Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Liberty — Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.

Liberty—Caulking Compound, Roof Cement, Paint. Carter Paint Co., Liberty, Ind.

Liberty—Ventilators. Penn Ventilating Company, Philadelphia, Pa.

Life-Line—Motors. Westinghouse Electric Corporation, Pittsburgh.

Lifetime—Roofing, Sheets, Shingles, Conductor Pipe and Fittings, Rivets, Tubing. Reynolds Metals Company, Louisville, Ky.

Lifetime — Furnaces. Hart & Crouse Corp., Oneida, N. Y.

Light Duty—V-Belts. B. F. Goodrich Co., Akron, Ohio.

Lightening—Hole Punches. Merchandising and Manufacturing Associates, Inc., Lancaster, Penn.

Lightweld — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Lincolnweld — Arc Welders. The Lincoln Electric Co., Cleveland, O.

Linewelder—Arc Welders. Lincoln Electric Co., Cleveland.

Line-O-Flo — Diffusers, Ventilators. Barber-Colman Company, Rockford, Ill.

Lipman—Air Conditioning Units, Coils, Compressors. General Refrigeration Div., Yates-American Machine Co., Beloit, Wis.

Liquidepth—Tank Gauge. Petrometer Corp., Long Island City, N. Y.

Lite-Cast — Combustion Chambers. Monogram Products Co., Philadelphia, Penn.

Lithoform—Coating Chemical for Galvanized, Zinc or Cadmium surfaces. American Chemical Paint Co., Ambler, Pa.

Little America—Gas Space Heaters. American Gas Heater Corp., Chicago.

Little Blacksmith — Punches and Slitting Machines. J. F. Kidder Mfg. Co., Inc., Burlington, Vt.

Little Bobby — Bending Brakes. A. R. Harris, Hammond, Ind.

Little Giant — Time Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Little Gem—Gas Burner. Columbia Burner Co., Toledo, Ohio.

Liv-Air—Air Conditioning Furnaces. Livingston, Inc., Marshall, Mich.

Lloyd's—Soldering Flux. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.

Load King—Hoist. Yale & Towne Mfg. Co., Philadelphia.

Lo-Bill—Storage Water Heater. Autogas Co., Chicago.

Lo-Blast — Gas Conversion Burners. Mid-Continental Metal Products Co., Chicago.

Lo-Boy—Stokers. Whiting Corp., Harvey, Ill.

Lockaire—Insulation Board. Plastergon Wall Board Co., Buffalo, N. Y.

Lockbolt—Metal Fasteners. Huck Manufacturing Co., Detroit.

Lock-Joint—Pipe and Pipe Fittings and Accessories. Inland Steel Products Co., Milwaukee.

Lock-Seam—Blow Pipe Fittings. Chicago Metal Mfg. Co., Chicago, Ill.

Locktite — Damper Regulators. Ohio Products Co., Cleveland, O.

Lo-Hed—Electric Hoists. American Engineering Co., Philadelphia.

Lo-Hiboy—Furnace. Century Engineering Corp., Cedar Rapids, Iowa.

Lok-Joint — Insulating Lath. Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn.

LoMaintenance—Electric Motors. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Loop-the-Loop—Snow Guards. Danzer Metal Works Co., Hagerstown, Md.

Lone Star—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Lo-Pilot—Space and Water Heaters. Allen Manufacturing Co., Inc., Nashville, Tenn.

Lo-Set—Stokers. Canton Stoker Corp., Canton, Ohio.

Lovejoy-Ideal—V-belts. Lovejoy Flexible Coupling Co., Chicago, Ill.

Lowdensite — Insulation. Insulite Div. Minnesota and Ontario Paper Co., Minneapolis, Minn.

Lown—Slip Roll Forming Machines. San Angelo Foundry & Machinery Co., San Angelo, Texas.

Luco—Acid Brushes, Flux, Solder. Thos. F. Lukens Metal Co., Philadelphia.

Lume-Tex—Aluminum Paint. Truscon Laboratories, Detroit.

Lumino—Paint. Koppers Co., Inc., Pittsburgh, Pa.

Luminous Vortex — Oil Burners. Iron Fireman Mfg. Co., Cleveland.

Lumitall — Aluminum Paint. National Mfg. Co., Tonawanda, N. Y.

Lustralumin — Aluminum Paint. Blue Ridge Talc Co., Inc., Henry, Va.

Luxaire—Blower-Filters, Furnaces, Furnace Pipe and Fittings. The C. A. Olsen Manufacturing Co., Elyria, Ohio.

Lyonore—Sheets. Lyon-Conklin & Co., Inc., Baltimore, Md.

Lyston—Soldering Flux. Farrelloy Co., Inc., Philadelphia.

Lytestone — Soldering Flux, Tinning Baths. Farrelloy Company, Inc., Philadelphia, Pa.

M

M & H — Zinc Sheets. Matthiessen & Hegeler Zinc Co., LaSalle, Ill.

M & M—Humidifiers and Fittings, Valves. McDonnell & Miller, Chicago, Ill.

M & T—Arc Welders. Metal & Thermit Corp., New York, N. Y.

M. E.—Motors. Marathon Electric Mfg. Corp., Wausau, Wis.

M.F.C.—Gas Floor Furnaces. Moncrief Furnace & Mfg. Co., Inc., Dallas, Tex.

M-H—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

M-R—Wire Glass. H. H. Robertson Co., Pittsburgh.

M-VB—Fittings, Valves. Scovill Mfg. Co., Morency-Van Buren Div., Sturgis, Mich.

M/W—Filters American Air Filter Co., Inc., Louisville, Ky.

MW-40 — Insulating Cement. Philip Carey Mfg. Co., Cincinnati.

MW-50 — Insulating Cement. Philip Carey Mfg. Co., Cincinnati.

Machete—Fans, Fan Blades, Ventilators. Aerovent Fan Co., Inc., Piqua, Ohio.

Magic-Aire—Wall Furnace. A. C. Co., Los Angeles, Calif.

Magic Dial—Control Systems. Midwest Automatic Control Co., Des Moines, Iowa.

Magic Dial—Thermostats. Perfex Corporation, Milwaukee, Wis.

Magnalite—Glass. J. Merrill Richards, Boston.

Magnehelic—Draft Gauge. F. W. Dwyer Mfg. Co., Chicago, Ill.

Majestic—Roofing, Skylights, Ventilators. W. A. Fingles, Inc., Baltimore, Md.

Maildrill—Electric Drills. Mall Tool Co., Chicago.

Mammoth—Furnaces, Stainless & Steel Products Co., Saint Paul, Minn.

Manganend—Electrodes. Arcos Corporation, Philadelphia, Pa.

Manganesed-Phospholene No. 7 — Rust Preventive. Western Reserve Laboratories, Cleveland.

Manganweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Marietta — Enamels and Lacquers. American-Marietta Co., Chicago, Ill.

Mark Time—Time Switches. M. H. Rhodes, Inc., Hartford, Conn.

Marquette—Presses and Dies. E. W. Bliss Co., Toledo, Ohio.

Mars—Joint Connector. Rattan Manufacturing Co., New Haven, Conn.

Mars—Furnaces. Pacific Gas Heating Co., San Francisco, Calif.

Mars Hi-Boy — Furnaces. Pacific Gas Heating Co., San Francisco.

Marsalis—Air Conditioners, Dust Collectors, Attic Fans, Ventilators. American Metal Products Co., Fort Worth, Texas.

Marsalis Chubby—Floor Furnace. American Metal Products Co., Fort Worth, Texas.

Marvair—Air Conditioning Units. Muncie Gear Works, Inc., Muncie, Ind.

Marvelous — Storage Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.

Mary-Mac—Storage Water Heaters. McDaniel Mfg. Co., Inc., Dallas, Texas.

Masco — Combustion Chambers. Munn and Steele, Inc., Newark, N. J.

Mastebond—Furnace Cement and Insulation. Munn and Steele, Inc., Newark, N. J.

Mastekast — Refractory. Munn and Steele, Inc., Newark, N. J.

Mastecote—Insulating Cement and Duct Insulation. Munn and Steele, Inc., Newark, N. J.

Mastcrete — Refractories. Munn and Steele, Inc., Newark, N. J.

Massachusetts—Blowers, Fans. Bishop & Babcock Mfg. Co., Cleveland, O.

Master — Controls, Motors, Pulleys, Thermostats. White Mfg. Co., St. Paul, Minn.

Master — Air Conditioning Furnaces. Premier Furnace Co., Dowagiac, Mich.

Master—Circles, Hangers and Fittings. Royal-Apex Mfg. Corp., Brooklyn, N. Y.

Master—Evaporative Coolers. Essick Mfg. Co., Los Angeles, Calif.

Master—Stokers. Muncie Gear Works, Inc., Muncie, Ind.

Master Blowertrol — Thermostatic Hydraulic Control. White Mfg. Co., St. Paul, Minn.

Master Kraft—Coils, Oil Burners, Furnaces. Harvey-Whipple, Inc., Springfield, Mass.

Master Line—Soldering Torches. Turner Brass Works, Sycamore, Ill.

Mastic Board—Insulation. Keystone Asphalt Products Co., Chicago.

Mayari R — Nickel-Chromium Sheets and Plates. Bethlehem Steel Co., Bethlehem, Pa.

Maya Air—Stack Head Dampers. Henry Furnace Co., Medina, Ohio.

McDonaldaire—Furnaces. A. Y. McDonald Mfg. Co., Dubuque, Ia.

McKee — Gas Burners. Eclipse Fuel Engineering Co., Rockford, Ill.

Mecco—Doors and Shutters, Skylights, Ventilators. Moeschel - Edwards Co., Inc., Cincinnati, O.

Meco—Gas Welding Rod, Torches. Modern Engineering Co., St. Louis, Mo.

Meco Jiffy—Soldering Torches. Modern Engineering Co., St. Louis, Mo.

Mel-O-Air—Gas Floor Furnaces. W. O. Wylie, Los Angeles.

Melo-Air — Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.

Mel-Rock — Fan-Filters, Ventilators and Washers. Mellish & Murray Co., Chicago, Ill.

Memphis Super-Fan—Ventilating Fans. Ford Blow Pipe & Manufacturing Co., Memphis, Tenn.

Merit—Water Heaters. Southern Heater Corporation, Compton, Calif.

Mercury—Soldering Irons. Vulcan Electric Co., Danvers, Mass.

Merland—Electric Water Heater. M. M. Hedges Mfg. Co., Inc., Chattanooga, Tenn.

Metalbestos—Pipe and Fittings. Williams - Wallace Co., San Francisco, Calif.

Metal-Glo—Metal Cleaners. Turco Products, Inc., Los Angeles.

Metalenf—Aluminum Paint. Pittsburgh Plate Glass Company, Pittsburgh.

Metalized Primer Spray—Midland Paint & Varnish Co., Cleveland, O.

Metallite — Paint. Glidden Company, Cleveland, O.

Metal-Master — Snips and Shears. J. Wiss & Sons Co., Newark, N. J.

Metalmaster — Band Saws. DoAll Co., Des Plaines, Ill.

Metalprep — Rust Preventative Chemicals. Neilson Chemical Co., Detroit, Mich.

Metal Zipper—Arc Welders. Mid-States Welder Mfg. Co., Chicago, Ill.

Metaphram — Draft Regulator. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Meteor—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

Meteor—Water Heaters. Hoyt Heater Co., Los Angeles.

Metrotherm — Thermostats. General Controls Co., Glendale, Calif.

Mex-Ko—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Meyer—Furnaces. Meyer Furnace Co., Peoria, Ill.

Micafil — Insulation. Munn and Steel Inc., Newark, N. J.

Mica-kote—Roofing Felt. Philip Carey Mfg. Co., Cincinnati.

Micro-Klean—Fuel Oil Filters. Cuno Engineering Corp., Meriden, Conn.

Microlock—Bearings. Shafer Bearing Corp., Downers Grove, Ill.

Micromax—Temperature and Humidity Recorders. Leeds & Northrup Co., Philadelphia, Pa.

MicroRald—Stainless Sheets. Washington Steel Corporation, Washington, Pa.

Microtrol—Damper Motors. Barber-Colman Co., Rockford, Ill.

Microtherm—Thermostats. Barber-Colman Co., Rockford, Ill.

Micro-Weld—Spot Welders. Micro Products Co., Chicago, Ill.

Midget—Bending Brake. A. R. Harris, Hammond, Ind.

Midget — Valves. Maid-O'-Mist, Inc., Chicago, Ill.

Midget King—Hoist. Yale & Towne Mfg. Co., Philadelphia.

Mighty Midget — Furnaces. Dowagiac Steel Furnace Company, Dowagiac, Mich.

Mighty Midget Unisheer—Shears. Stanley Works, New Britain, Conn.

Milcor — Furnace Pipe, Roofing and Roofing Products. Inland Steel Products Co., Milwaukee.

Milford—Saw Blades. Henry G. Thompson & Son Co., New Haven, Conn.

Milwaukee—Presses and Dies. Doelger & Kirsten, Inc., Milwaukee.

Milwaukee—Water Heaters. A. O. Smith Corporation, Milwaukee.

Mineral Wool Board—Insulation. Armstrong Cork Company, Lancaster, Pa.

Minicorder—Recorders. Dickson Co., Chicago, Ill.

Mini-Miser — Storage Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.

Mint Kote — Metal Cleaner. Klem Chemicals, Inc., Detroit.

Minnemeyer — Conductor Hooks. La-Crosse Steel Roofing & Corrugating Co., LaCrosse, Wis.

Miracula—Heat Pump. General Eng. & Mfg. Co., St. Louis, Mo.

Missouri Flint—Fire Brick. Chicago Fire Brick Co., Chicago, Ill.

Mixend—Electrodes. Arcos Corp., Philadelphia, Pa.

Mixson—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

ModernAire—Furnaces, Repairs, Stokers. Des Moines Furnace and Stove Repair Co., Des Moines, Iowa.

ModernAire—Fans, Heaters. National Gas Equipment Co., Inc., Terrell, Tex.

Moderne - Aire — Furnaces, Blowers. Agricola Furnace Co., Gadsden, Ala.

Modern Console—Heaters. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.

Moderne—Blowers, Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.

Modernistic—Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.

Moduflow—Sectional Controls. Minneapolis-Honeywell Regulator Co., Minneapolis.

Modutrol — Damper Duct Motors and Fan Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Mogul — Rust Preventive Chemicals, Soot Destroyer. North American Fibre Products Co., Cleveland, O.

Mogul Seal—Compounds. North American Fibre Products Co., Cleveland.

Mohawk—Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Moldit—Refractories. Refractory & Insulation Corp., New York, N. Y.

Monad-Flow — Gas Burners. Monad Products Co., Dearborn, Mich.

Monarch—Furnaces. Forest City Foundries Co., Cleveland, O.

Monerief — Furnaces. Henry Furnace Company, Medina, O.

Monel—Sheets, Plate and Tubing, Electrodes. International Nickel Co., New York, N. Y.

Monend—Arc Welding Electrodes. Arcos Corporation, Philadelphia.

Monitor—Furnaces. Marshall Furnace Co., Marshall, Mich.

Monmouth—Humidifiers. Cleveland Humidifier Co., Cleveland.

Mono B-H—Furnace Insulation. Baldwin Hill Co., Trenton, N. J.

Monocast—Refractories. Ramtite Co., Chicago, Ill.

Mono-Deflector—Baffles. Monogram Products Co., Philadelphia, Penn.

Monogram — Furnaces. Quincy Stove Mfg. Co., Quincy, Ill.

Mono-Line—Duct Insulation. Quigley Company, Inc., New York, N. Y.

Monoport—Gas Burners. Modern Controls Corp., Detroit, Mich.

Monovent — Ridge Ventilators. Burt Mfg. Co., Akron, O.

Morflex — Flexible Couplings. Morse Chain Co., Ithaca, N. Y.

Morlex—Rust Preventives. Carbide and Carbon Chemicals Corp., New York, N. Y.

Morse—Blow Pipe Collectors. Goergen-Mackwirth Co., Inc., Buffalo.

Mor-Sun — Furnaces. Morrison Steel Products, Inc., Buffalo, N. Y.

Mortemp Chimney Furnace—Air Conditioning Furnaces. Chimney-Furnace Corp., Rockville, Md.

Mortex—Metal Protective Coatings. J. W. Mortell Co., Kankakee, Ill.

Mortite — Caulking and Glazing Compounds, Roofing Paint. J. W. Mortell Co., Kankakee, Ill.

Motorelay — Contact Device. Barber-Colman Co., Rockford, Ill.

Motorized Draft-O-Stat—Controls. Hot-stream Heater Co., Cleveland.

Motorstoker—Stokers. Hershey Machine & Foundry Co., Manheim, Pa.

Mototurb—Ventilators. Uno Ventilator Co., Cliftondale, Mass.

Mountain Air—Evaporative Conditioners and Fans. Central States Mfg. Co., Inc., Arkansas City, Kans.

Muckle-Vents—Roof Ventilators. Muckle Mfg. Co., Owatonna, Minn.

Mule-Hide — Cement, Caulking Compounds, Paint and Roofing. Lehon Company, Chicago, Ill.

Multiblade—Welding Fume Exhausters. General Blower Co., Morton Grove, Ill.

Multiclone—Collectors. Western Precipitation Corp., Los Angeles, Calif.

Multi-Duty—Filters. American Air Filter Co., Inc., Louisville, Ky.

Multi-Flame—Gas Burners. American Gas Burner, Inc., Indianapolis, Ind.

Multi-Max—Punch Presses. Diamond Machine Tool Co., Los Angeles, Calif.

Multitherm — Air Conditioning Units. Clarage Fan Co., Kalamazoo, Mich.

Multi-V — Belts. B. F. Goodrich Co., Akron, O.

Multivane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.

Multi-Vent—Air Diffuser. Pyle-National Company, Chicago.

Multi-Zone—Conditioners. Micheli Air Conditioning Co., Inc., Schenectady, N. Y.

Murex—Arc Welding Electrodes. Metal & Thermit Corp., New York, N. Y.

Myka-Disk—Baffles. Insulation & Refractories Co., Williamson, N. Y.

N

NCG—Flux and Welding Rod. National Cylinder Gas Co., Chicago.

Nairoil—Oil Burners. National Airoil Burner Co., Philadelphia, Pa.

Nalco—Flux. National Lead Co., New York City.

NarroWall—Wall Furnaces. Holly Manufacturing Co., Pasadena, Calif.

National—Blowers. Furnaces. Ma-Giri Foundry & Furnace Co., Bloomington, Ill.

National—Furnaces. Excelsior Stove & Mfg. Co., Quincy, Ill.

National—Horizontal Furnaces. Stainless & Steel Products Co., Saint Paul, Minn.

National — Water Heaters. Mueller Heater Co., Cleveland.

National-Champion — Furnaces. National Heater Co., St. Paul, Minn.

Natroco — Paint. National Mfg. Corp., Tonawanda, N. Y.

Natur-Temp—Flame-proof Cotton Insulation. Barnhardt Manufacturing Co., Charlotte, N. C.

Naturcone—Board Insulation. Wilson & Co., Inc., Chicago, Ill.

Nebelastic—Roof Cement. Nebel Manufacturing Co., Cleveland.

Nebel-Kote — Paint. Nebel Manufacturing Co., Cleveland.

Nelson—Blower-Filter Units, Furnaces, Stokers. Heating Assurance, Inc., Spokane, Wash.

Nev-A-Rust—Paint. Glidden Co., Cleveland, Ohio.

Never Slip — Conductor Fittings. La-Crosse Steel Roofing & Corrugating Co., LaCrosse, Wis.

New American—Smoke Pipe Dampers. Griswold Mfg. Co., Erie, Pa.

New Braze—Flux. Sherman & Co., New York City.

New Departure — Oil Burners. Breeze Corporations, Inc., Newark, N. J.

New Detroit—Draft Gages. Detroit Air Conditioning Service Co., Inc., Detroit, Mich.

Niagara—Furnaces, Blowers, Oil Burners. Forest City Foundries Co., Cleveland, O.

Nibco—Copper Tube Fittings. Northern Indiana Brass Co., Elkhart, Ind.

Nib-Shear—Bench Shear. H-A Mfg. Co., York, Penn.

Nickelend — Electrodes. Arcos Corp., Philadelphia, Pa.

Nickeloid—Sheets. American Nickeloid Co., Peru, Ill.

Nickend — Electrodes. Arcos Corporation, Philadelphia.

Nickend — Electrodes. Arcos Corporation, Philadelphia.

Nitecir—Night Air Cooling Fans. Lau Blower Co., Dayton, Ohio.

Noah's Pitch — Roof Cement. Waterproofing. Philip Carey Mfg. Co., Cincinnati.

NoDrip—Insulation. J. W. Mortell Co., Kankakee, Ill.

No-Dust—Grinders. Hammond Machinery Builders, Inc., Kalamazoo, Mich.

No-Flex—Registers and Faces. Hart & Cooley Mfg. Co., Holland, Mich.

Noham—Valves. Gas & Oil Industry Laboratories, Inc., Irvington, N. J.

Nokorode—Flux. Chase Brass & Copper Co., Incorporated, Waterbury, Conn.

Non-Clogging — Spray Nozzles. Link Belt Co., Chicago, Ill.

Non-Con-Dux — Cement, Insulation, Paper, Paste. Grant Wilson, Inc., Chicago, Ill.

Non-Metallic — Registers. Standard Stamping & Perforating Co., Chicago, Ill.

Non-Spark—Mallets. New Plastic Corporation, Hollywood, Calif.

Non-Syphoning — Steel Roofing. Inland Steel Products Co., Milwaukee.

Norblo—Blowers, Fittings, Collectors, Housing, Air Washers. Northern Blower Co., Cleveland, O.

Norco—Stove and Furnace Repairs. Northwestern Stove Repair Co., Chicago, Ill.

No-Rivet — Damper Regulators. Ohio Products Co., Cleveland, O.

Nor'wester — Blowers. Grand Rapids Die & Tool Co., Grand Rapids, Mich.

Northwind — Air Conditioning Unit. Pleasantaire Corporation, Washington, D. C.

Norwesco — Ducts, Fittings, Eaves Trough, Gutters, Pipe, Ridge Rolls, Roof Trim. Northwest Metal Products, Inc., Seattle, Wash.

No-Spat—Welding Flux. Midland Paint & Varnish Co., Cleveland, Ohio.

No-Streak — Registers. Rock Island Register Co., Rock Island, Ill.

No Tar In—Roofing Paint. Rutland Fire Clay Co., Rutland, Vt.

No. 20—Furnace Cement. Philip Carey Mfg. Co., Cincinnati.

No. 23 — Furnace Cement, Asbestos. Philip Carey Mfg. Co., Cincinnati.

Novoid—Bases, Insulation. Cork Import Corp., New York, N. Y.

Nu-Air—Blades, Fans, Louvres, Ventilators. Meier Electric & Machine Co., Indianapolis, Ind.

Nu-Alpina—Gravity Roof Ventilators. Inland Steel Products Co., Milwaukee.

Nu-Braze—Flux and Solder. Sherman & Co., New York City.

Nudeck—Roof Cement. United Gilsonite Laboratories, Scranton, Pa.

Nu Galv — Metal Protecting Paint. Southern States Iron Roofing Co., Savannah, Ga.

Nu-Grip—Snips and Shears. J. Wiss & Sons Co., Newark, N. J.

Nu-Notch—Ventilators. Knowles Mushroom Ventilator Co., Upper Montclair, N. J.

Nupin Plastic — Mallets. New Plastic Corporation, Hollywood, Calif.

Nuvent—Ventilators. Aeolus Dickinson, Chicago, Ill.

Nutipe—Gas Conversion Burners. Columbia Burner Company, Toledo, O.

Nu-Trojan—Combustion Chambers. A. R. Webber Co., Inc., New Haven, Conn.

Nu-Wood—Rigid Insulation. Wood Conversion Co., St. Paul, Minn.

O

OEM—Combustion Chambers, Oil Burner Fittings. Oil Equipment Mfg. Corp., New Haven, Conn.

OK — Grinders. Hammond Machinery Builders, Inc., Kalamazoo, Mich.

OX—Punches. Parker Kalon Corporation, New York City.

Octopus, Jr.—Welding Fume Exhauster. Chelsea Fan & Blower Co., Inc., Irvington, N. J.

Ohio Triple Twisted — Wire Hangers. Ohio Wire Products Co., Dover, Ohio.

Oil-A-Fire—Burners, Furnaces. Automatic Firing Corporation, St. Louis.

Oil-Aire-Flo — Furnaces. Lennox Furnace Co., Marshalltown, Iowa.

Oil Chief — Furnaces. Dowagiac Steel Furnace Company, Dowagiac, Mich.

Oil-Economy — Oil-Burning Air-Conditioning Furnace. International Heater Co., Utica, N. Y.

Oil-Aire — Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Oil-fire—Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Oilfire Monogram — Furnaces. Quincy Stove Mfg. Co., Quincy, Ill.

Oilfyre—Furnaces. Lennox Furnace Co., Marshalltown, Ia.

Oilifter — Fuel Oil Pump. Automatic Products Co., Milwaukee.

Oil-n-Aire — Oil Burners. Breeze Corporations, Inc., Newark, N. J.

Oil-O-Matic — Oil Burners, Furnaces. Williams Oil-O-Matic Division, Eureka-Williams Corp., Bloomington, Ill.

Oilway—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.

OL'Faithful — Humidifiers. Maid-O'-Mist, Inc., Chicago.

Olympic — Heaters, Washington Stove Works, Everett, Wash.

One-Minute—Furnaces. Worsham Company, Inc., St. Louis.

Out-O-Wall — Registers. Rock Island Register Co., Rock Island, Ill.

Ovaltube — Gas Burners. Beck Engineering Combustion Kompany, St. Louis, Mo.

Oxweld—Welding Apparatus. Linde Air Products Co., New York, N. Y.

Oxycutend — Electrodes. Arcos Corporation, Philadelphia.

Ozark—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Ozite—Insulation. American Hair & Felt Co., Chicago, Ill.

P

P and C—Roofing Felt. Proie & Coogan Heating Co., Pittsburgh.

P and C Elaterite—Roof Cement, Paint. Proie & Coogan Heating Co., Pittsburgh.

P & H—Cranes, Electrodes, Hoists, Arc Welders. Harnischfeger Corporation, Milwaukee, Wis.

P&K—Oil Burners. Persson & Kellison, Seattle, Wash.

PBA Unit—Utility Room Furnace. Dowagiac Steel Furnace Co., Dowagiac, Mich.

P-C—Heaters. Pernot Corporation, Norwalk, Calif.

P.I.V.—Gear. Link Belt Co., Chicago.

P-K—Punches, Screws. Parker-Kalon Corporation, New York, N. Y.

Pabco—Waterproofing Duct and Furnace Insulation. Paraffine Companies, Inc., San Francisco, Calif.

Pabco Coolite—Sheet Metal Paint. Paraffine Companies, Inc., San Francisco, Calif.

Pacific—Furnaces. W. W. Rosebaugh Co., Salem, Ore.

Pacific — Furnaces, Heaters. Palmer Mfg. Corp., Phoenix, Ariz.

Pacific—Furnaces. W. W. Rosebraugh Co., Salem, Oreg.

Pacific—Water Heaters. United States Radiator Corporation, Detroit.

Packaged Weather — Store Coolers. General Electric Co., Bloomfield, N. J.

Packard—Water Heaters. W. M. Dary Co., Long Beach, Calif.

Paintbond—Bonderized Sheets. Carnegie-Illinois Steel Corp., Pittsburgh.

Pak-Ice—Machines. Vilter Manfacturing Co., Milwaukee.

Palco Wool—Saferized—Insulation. Pacific Lumber Co., San Francisco, Calif.

Palmaire—Blowers, Furnaces, Humidifiers. Palmer Mfg. Co., Phoenix, Ariz.

Panclaire—Wall Furnaces. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.

Panclox—Stainless Combustion Chambers. Stefco Steel Co., Michigan City, Ind.

Panclray—Wall Heaters, Suspended Furnaces. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Paplco — Water Heaters. Continental Water Heater Co., Los Angeles.

Par—Compressors. Lynch Corp., Toledo, O.

Paragon Booster—Water Heaters. Continental Water Heater Company, Los Angeles, Calif.

Paramount — Evaporative Air Conditioners. Essick Mfg. Co., Los Angeles, Calif.

Paramount — Flashing. Flemm Lead Company, Inc., Long Island City, N. Y.

Paramount — Hollow Metal Windows. Willis Steel Corp., Galesburg, Ill.

Parco—Skylight Lifts. Park City Cornice Works, Inc., Bridgeport, Conn.

Parco—Metal Cleaners and Finishers. Parker Rust-Proof Co., Detroit, Mich.

Parkerizing—Metal treating processes. Parker Rust-Proof Co., Detroit, Mich.

Payne-A-Vent — Fittings. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.

Payneheat—Heating Units. Payne Furnace Co., Inc., Beverly Hills, Calif.

Peer — Welders, Welding Timers. Pier Equipment Mfg. Co., Benton Harbor, Mich.

Peerless—Blowers, Washers. New York Blower Co., Chicago, Ill.

Peerless—Eaves Trough Hangers. Abbott Mfg. Co., Painesville, O.

Pemco — Stainless Firebox Fittings, Baffles. Oil Equipment Mfg. Co., New Haven, Conn.

Penetrol—Paint. Flood Co., Cleveland.

Penflex—Flexible Metal Hose and Fittings. Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Penn.

Penglass — Round "Accelerator" Roof and "Relief" Ridge Ventilators. Pennsylvania Wire Glass Co., Philadelphia.

Penna—Furnaces. Pennsylvania Furnace & Iron Co., Warren, Penn.

Penn-Aire — Furnaces. Union Mfg. Co., Boyertown, Pa.

Penn-Mont—Slate. Structural Slate Co., Pen Argyl, Pa.

Penn Packaged Heat—Air Conditioners, Oil Burners, Furnaces. Penn Boiler & Burner Mfg. Corp., Lancaster, Penn.

PennSalt—Rust Preventive Chemicals and Cleaners. Pennsylvania Salt Mfg. Co., Philadelphia, Pa.

Pentco — Combination Snips and Punches. Penn Tool Company, Philadelphia, Pa.

Perco-Flash—Water Heaters. Kresno-Stamm Mfg. Co., Palisades Park, N. J.

Percoproof — Waterproofing. Philip Carey Mfg. Co., Lockland, Ohio.

Perfection—Eaves Trough Fittings and Accessories. Iwan Brothers. South Bend, Ind.

Perfection — Mineral Wool Insulation. Riverton Lime & Stone Co., Inc., Riverton, Va.

Perfection Senior—Water Heaters. Perfection Water Heater Co., Glendale, Calif.

Perfection Standard — Water Heaters. Perfection Water Heater Co., Glendale, Calif.

Perfecto—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.

Permaclad—Clad Sheets. Alan Wood Steel Co., Conshohocken, Penn.

Permaglas—Water Heaters. A. O. Smith Corporation, Milwaukee.

Pernoco—Evaporative Coolers. Pernot Corp., Norwalk, Calif.

Perry—Damper Clips and Tips. Griswold Mfg. Co., Erie, Pa.

Pet—Oil Burners. Brooks Corporations, Inc., Newark, N. J.

PeTeCo—Baffles, Interlocking, Combustion Chambers. B. A. Peterson Co., Dowagiac, Mich.

Petro—Oil Burners, Furnaces and Water Heaters. Petroleum Heat & Power Co., Stamford, Conn.

Pexto—Metal Workers' Machines and Tools, Roofers Tools. Peck, Stow & Wilcox Co., Southington, Conn.

Pickle Polish—Stainless Cleaner. American Chemical Paint Co., Ambler, Pa.

Pioneer — Controls. Crown Controls Company, Inc., New Bremen, Ohio

Pioneer—Oil Burners. Scott-Newcomb, Inc., St. Louis, Mo.

Pipeline—Stokers and Stoker Furnaces. Pocahontas Fuel Co., Inc., Stoker Div., Cleveland, Ohio.

Pittsburgh—Conversion Gas Burner, Suspended Furnace, Automatic Gas Equipment Co., Pittsburgh.

Planeweld — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Plastic-Calk — Caulking Compounds. Chamberlin Company of America, Detroit.

Plastic Elastigum — Cement. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

PlastiKon—Rubber Putty. B. F. Goodrich Co., Akron, Ohio.

Plastic Pil—Cement. Barret Div., Allied Chemical & Dye Corp., New York, N. Y.

Plastikroof—Roofing Paint. Evercrete Corporation, New York, N. Y.

Plastiktrim—Plastic Mouldings, Trim. R. F. Werner Co., New York, N. Y.

Plastipitch—Protective Coated Steel Sheets. Koppers Co., Inc., Pittsburgh, Pa.

Plasti-Static—Air Filter. Air Devices, Inc., New York, N. Y.

Plasti-Static—Air Filter. Master Products Co., Inc., Chicago, Ill.

Plastold—Compounds, Furnace Cement. Plastic Products Co., Detroit, Mich.

Playford — Stokers. Rosedale Fdy. & Machine Co., Pittsburgh.

Plexiform—Blowers. Bayley Blower Co., Milwaukee, Wis.

Polyken—Industrial Tape. Bauer & Black Div., The Kendall Co., Chicago, Ill.

Portovent — Flexible Hose. American Ventilating Hose Co., New York City.

Porto-Shear—Electric Shears. Van Dorn Electric Tool Co., Towson, Md., and Black & Decker Mfg. Co., Towson, Md.

Powergas—Gas Burners. Jackson & Church Co., Saginaw, Mich.

Powerol—Oil Burners. Jackson & Church Co., Saginaw, Mich.

PowerRated — Furnaces. Jackson & Church Co., Saginaw, Mich.

Powerstat—Valves. Mercoid Corp., Chicago, Ill.

Power Vane—Pneumatic Grinders. Chicago Pneumatic Tool Co., New York City.

Powrmatic—Oil Burners. Kresno-Stamm Mfg. Co., Palisades Park, N. J.

Precipitron — Automatic Air Filter. Westinghouse Electric, Cleveland.

Premier—Electrodes and Welding Rod. American Steel & Wire Co., Cleveland, Ohio.

Premier Automatik — Stoker-Fired Air Conditioning Furnaces. Premier Furnace Co., Dowagiac, Mich.

Premier DeLuxe — Furnaces. Premier Furnace Co., Dowagiac, Mich.

Premier Master — Furnaces. Premier Furnace Co., Dowagiac, Mich.

Pre-Notch—Ducts, Pipe and Fittings. Gray Metal Products, Inc., Rochester, N. Y.

Prentice—Pillow Blocks. Western Thermal Equipment Co., Los Angeles.

Preprite — Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.

Prepwash—Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.

Presdwoods—Insulation Board. Masonite Corp., Chicago.

President — Storage Water Heaters. Crown Heater Co., Compton, Calif.

Presstite—Furnace and Roof Cement, Compounds, Paint. Presstite Engineering Co., St. Louis, Mo.

Presteel—Metal Stampings. Worcester Pressed Steel Co., Worcester, Mass.

Presto — Soldering Torch. American Products Corporation, Chicago.

Prest-O-Lite — Soldering Coppers, Soldering Torches, Welding Equipment. Linde Air Products Co., New York, N. Y.

Prest-O-Weld—Oxy-Acetylene Welding Equipment, Torches. Linde Air Products Co., New York, N. Y.

Prime-Kote — Roofing Paint. Philip Carey Mfg. Co., Lockland, Ohio.

Princo — Hygrometers, Psychrometers, Electric Relays, Thermometers and Thermostats. Precision Thermometer and Instrument Co., Philadelphia, Pa.

Propellair—Fans, Louvers, Ventilators. Robbins & Myers, Inc., Springfield, Ohio.

Properaire—Blowers. Grand Rapids Die & Tool Co., Grand Rapids, Mich.

Protector—Snow Guards. David Levow, New York, N. Y.

Protector—Germicidal Lamps. Merchandising and Manufacturing Associates, Inc., Lancaster, Penn.

Protectorelay—Electric Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Puffglass—Filters. Drico Industrial Corp., New York, N. Y.

Pul-Air—Ventilators. Penn Ventilating Co., Philadelphia, Pa.

Pul-Air Ridge—Ventilators. Penn Ventilating Co., Philadelphia.

Pul-Lift—Hoist. Yale & Town Mfg. Co., Philadelphia.

Pulverenne—Stokers. American Coal Burner Co., Chicago, Ill.

Punchawl—Tools. Hub Specialty Co., Reading, Mass.

Punkah—Louvers. Kelvin & Wilfrid O. White Co., Boston, Mass.

Puraire—Blower-Filters. Korts Blower Mfg. Co., Grand Rapids, Mich.

Pure-Dure—Water Heaters. Continental Water Heater Co., Los Angeles.

Purox—Oxy-Acetylene Welding Equipment and Torches. Linde Air Products Co., New York, N. Y.

Pyralux—Enamels and Lacquers. E. I. du Pont de Nemours & Co., Wilmington, Del.

Pyrobar—Roofing Tile. United States Gypsum Co., Chicago, Ill.

Pyrotron — Temperature Recorders. Bailey Meter Co., Cleveland, O.

Q

Q-Chrome—Insulating Cement. Quigley Company, Inc., New York, N. Y.

Q-Chromatic—Insulating Cement. Quigley Company, Inc., New York, N. Y.

Q-T Ductliner—Celotex Corp., Chicago, Ill.

Quad—Furnace Blowers. Trade-Wind Motorfans, Inc., Los Angeles.

Quaker City—Eaves Trough and Gutters, Conductor Fittings and Accessories, Pipe, Ridge Rolls and Ridging. Berger Brothers Company, Philadelphia, Pa.

Quantrol—Duct Turning Vanes. Register & Grille Mfg. Co., Inc., Brooklyn.

Quick—Water Heaters. Security Mfg. Co., Kansas City, Mo.

Quick Acting—Screw Clamps. Mehl Machinery, Houston, Tex.

Quick Action — Clamps. Roesch Tool Products, Los Angeles.

Quick Heat—Furnaces. Heaters. American Stove Co., Lorain, Ohio.

Quick Heat—Heating Equipment. Tjernlund Mfg. Co., St. Paul, Minn.

Quick Heater—Oil Burners. Quick Furnace & Supply Company, Des Moines, Iowa.

Quick-Set—Dividers. Reiner & Campbell, Inc., Elizabeth, N. J.

Quick-Set — Waterproofing. American Flurosit Co., Cincinnati, Ohio.

Quickwork — Shears and Sheet Metal Machines. Whiting Corporation, Harvey, Ill.

Quiet Flame — Oil Burners. Volcano Burner Corp., New York City.

Quiet May—Oil Burners. May Oil Burner Div., Geroter May Corp., Baltimore.

Quiet Zone—Blowers. Palmer Manufacturing Co., Phoenix, Ariz.

Quik-Shot—Soldering Iron. Kemode Mfg. Co., New York, N. Y.

"Quilt"—Insulation. Samuel Cabot, Inc., Boston, Mass.

R

R & G — Grilles, Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

R & I—Furnace Cement and Insulation, Baffles, Combustion Chambers. Refractory & Insulation Corp., New York, N. Y.

R & M—Motors and Ventilators. Robbins & Myers, Inc., Springfield, O.

r/h — Furnaces. Rybolt Heater Company, Ashland, Ohio.

R.I.W.—Paint and Waterproofing. Toch Bros., Inc., Staten Island, N. Y.

R. I. W. Liquid Konkerit—Paint. Toch Bros., Inc., Staten Island, N. Y.

R. I. W. Plug-A-Leak—Roofing Paint. Toch Bros., Inc., Staten Island, N. Y.

R. M.—Slip Roll Forming Machines. Riverside Machinery Co., Minneapolis, Minn.

RPM—Paint and Roofing Steel. H. H. Robertson Co., Pittsburgh, Pa.

R-H-M — Hygrometers, Psychrometers, Thermometers. Palmer Thermometers, Inc., Cincinnati, Ohio.

R-U-F — Fans and Ventilators. Reed Unit-Fans, Inc., New Orleans, La.

Racine—Stokers. Nelson Bros. & Strom Co., Racine, Wis.

Radial-Flow — Heaters. Thermomatic Corp., Willoughby, Ohio.

Radiant—Heaters. Phillips & Buttorff Mfg. Co., Nashville, Tenn.

Radiant Comfort—Gas Burners. Van's Gas Burner Service, Detroit.

RadianTile — Floor Tile. Cannelton Sewer Pipe Co., Cannelton, Ind.

Radiation Discs—Stoker Baffles. Munn and Steele, Inc., Newark, N. J.

Radi-Ion—Ozone Apparatus. Montgomery Brothers, San Francisco, Calif.

Radius Master—Templates. Rapidesign, Inc., Glendale, Calif.

Radolite—Insulating Cement and Refractories. Pyrolite Products Co., Cleveland, O.

Ralatite — Roof Ventilators. Aeolus Dickinson, Chicago, Ill.

Ramco — Chimney Caps and Tops, Ventilators. Royal-Apex Mfg. Corp., Brooklyn, N. Y.

Ramfeed—Stokers. Canton Stoker Corp., Canton, Ohio.

Ranarex — CO_2 Analyzers. Permutit Company, New York City.

Ransome-Forster — Gas Burners. Ransome Co., Emeryville, Calif.

Rawl-Anchors — Bolts. Rawlplug Company, Inc., New York, N. Y.

Rawl-Drive—Masonry Nails and Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.

Rawl-Tapers—Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.

Reale-Heat—Furnaces. Peerless Sales and Supply, Lincoln, Nebr.

Reco—Coils. Roessing Mfg. Co., Pittsburgh, Pa.

Reco—Fans, Motors, Buffers, Relays and Switches. Reynolds Electric Co., Chicago, Ill.

Recoy — Air Conditioning Units and Coils. Refrigeration Economics Co., Inc., Canton, O.

Red Cap—Spinner Ventilator. Warner Ventilator Co., LaGrange, Ind.

Red Crown—Domestic Water Heaters. Hynes & Cox Electric Corp., Albany, N. Y.

Red Devil — Furnace Cement. Pecora Paint Co., Philadelphia, Pa.

Redi—Stokers. General Machinery Co., Spokane, Wash.

Redi-Nail—Eaves Trough Hangers. Abbott Mfg. Co., Painesville, O.

Redi-Paint—Prime Paint for Galvanized Surfaces. Turco Products, Inc., Los Angeles, Calif.

Redi-Set—Sheet Metal Workers' Tools. Whitney Metal Tool Co., Rockford, Ill.

Red Metallic — Roofing Paint. Clinton Metallic Paint Co., Clinton, N. Y.

Red-Reading-Mercury — Hygrometers, Psychrometers and Thermometers. The Palmer Thermometers, Inc., Cincinnati, O.

Red Seal—Sheets. Benjamin Wolff and Company, Chicago, Ill.

Red Top — Insulation. United States Gypsum Company, Chicago.

Red Top — Thermostats. H-B Instrument Company, Philadelphia, Pa.

Red X—Cleaners and Polishers. Turco Products, Inc., Los Angeles, Calif.

Rego—Brazing Torches. National Cylinder Gas Co., Chicago, Ill.

Rego—Flux. Bastian-Blessing Co., Chicago, Ill.

Reflaloy—Stove and Furnace Repairs. Pittsburgh Furnace Parts Co., Pittsburgh, Pa.

Renu-Vent—Steel Wool Filters. American Air Filter Co., Inc., Louisville, Ky.

Republic — Gas Conversion Burners. Autogas Corp., Chicago, Ill.

Republic-Taylor—Terne Roofing Plates. Republic Steel Corporation, Cleveland, Ohio.

Restocote—Paint. Reilly Tar & Chemical Corporation, Indianapolis, Ind.

Rex—Bearings, Pillow Blocks, Blower-Filter Units, Blowers, Fan-Filter Units, Blower Wheels. Air Controls Inc., Cleveland, O.

Rex—Bearings and Nozzles. Chain Belt Co., Milwaukee, Wis.

Rex—Controls, Draft Diverters, Water Heaters. Cleveland Heater Co., Cleveland.

Rex—Roof Flashing. Simplex Manufacturing Co., Fond du Lac, Wis.

Rex-Airate — Fans, Ventilators. Air Controls, Inc., Cleveland.

Rex-Air-Pak—Blower Units. Air Controls, Inc., Cleveland, O.

Rexare—Arc Welders, Welding Electrodes. Sight Feed Generator Co., West Alexandria, Ohio.

Rexco—Refractories. Rex-Roto Corporation, Detroit.

Rex-Flex—Flexible Duct Connectors. Chicago Metal Hose Corp., Maywood, Ill.

Rexide—Metal Protecting Paint. A. C. Horn Co., Inc., Long Island City, N. Y.

Rex Junior—Welders. Rex Welder & Engineering Company, Kansas City, Mo.

Rexoil — Oil Burners and Furnaces. Reif-Rexoil, Inc., Buffalo.

Rex-Tube — Flexible Duct Connectors. Chicago Metal Hose Corp., Maywood, Ill.

Rexvane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Rex Vibra-Sorbers — Vibration Eliminating Metal Hose. Chicago Metal Hose Corporation, Maywood, Ill.

Rex-Weld—Flexible Duct Connectors. Chicago Metal Hose Corp., Maywood, Ill.

Rex-Weld Unimetal—Flexible Hose. Chicago Metal Hose Corp., Maywood, Ill.

Rexwelders—Spot Welders. Rex Welder & Engineering Co., Kansas City, Mo.

Rexistal — Stainless Steels. Crucible Steel Co., of America, New York, N. Y.

Rheotrol — Horizontal Oil Burners. Breese Burners, Inc., Chicago.

Rhinamel—Enamels. Tropical Paint & Oil Co., Cleveland, O.

Ridgelator — Ridge Roof Ventilator. Klauer Mfg. Co., Dubuque, Ia.

Rigid—Hack Saw Frames. Machine Rebuilding Co., Detroit, Mich.

Rincon-trol — Enamels and Lacquers. Roxalin Flexible Finishes, Inc., Elizabeth, N. J.

Rip-o-Lin—Enamels. Glidden Company, Cleveland, O.

Rip-pi—Enamels, Lacquers and Paints. Hilo Varnish Corp., Brooklyn, N. Y.

River Breeze—Exhausters and Fans. Kloppenborg Aluminum Fdry., Davenport, Iowa.

Rivnut—Blind Fasteners. B. F. Goodrich Co., Akron, Ohio.

Roberts—Floor Furnace. Bone Tool & Gauge Co., Detroit.

Robinson—Brakes, Presses and Dies, Punches. New Albany Machine Mfg. Co., New Albany, Ind.

Rockwell-EMCO—Gas Pressure Regulating Valve. Pittsburgh Equitable Meter Div., Rockwell Manufacturing Co., Pittsburgh.

Rol-Away—Carrier Beall Pipe & Tank Corp., Portland, Ore.

Rollaire — Air Conditioning Furnaces. Hipoint Corp., Bellefontaine, O.

Roof Flange—Flashing. Eagle-Picher Co., Cincinnati, O.

Roofkoter — Paint. Tropical Paint & Oil Co., Cleveland, O.

Roofsaver—Roof Cement. Baer Brothers, New York, N. Y.

Rotary — Gravity Ventilators. The Swartwout Co., Cleveland, O.

Roto—Insulating Cement and Combustion Chambers. Rex-Roto Corporation, Detroit.

Roto-Blast — Furnaces. Moncrief Furnace Co., Atlanta, Ga.

Roto-Clone—Dust Collectors. American Air Filter Co., Inc., Louisville, Ky.

Rotoflame—Oil Burners. Oil Equipment Laboratories, Inc., Elizabeth, N. J.

Rotojet—Nozzles. Binks Mfg. Co., Chicago, Ill.

Roxaprene — Enamels and Lacquers. Roxaline Flexible Finishes, Inc., Elizabeth, N. J.

Royal—Furnaces. Hart & Crouse Corporation, Oneida, N. Y.

Royal—Space Heaters. Chattanooga Implement & Mfg. Co., Chattanooga, Tenn.

Royal—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.

Royalastic—Roof Cement. A. Wilhelm Co., Reading, Pa.

Royal Blue — Furnace Brushes. Schaefer Brush Mfg. Co., Milwaukee, Wis.

Royal Clipper—Metal Cutter. Merchandising and Manufacturing Associates, Inc., Lancaster, Penn.

Rubalt—Enamels, Lacquers and Paint. Alfred Hague & Co., Brooklyn, N. Y.

Rubalt B A—Paints. Alfred Hague & Co., Brooklyn, N. Y.

Rubber-in-Shear — Vibration Isolating Pads. Korfund Co., Long Island City.

RubySuld—Solder, Soldering Flux, Ruby Chemical Co., Columbus, O.

Rudco—Furnaces. Rudy Furnace Co., Dowagiac, Mich.

Rudistoel — Furnaces. Rudy Furnace Co., Dowagiac, Mich.

Rusco — Windows. F. C. Russell Co., Cleveland, Ohio.

Rust Bloc No. 20—Coating. Turco Products, Inc., Washington, D. C.

Rustall—Paints. National Engineering Products, Inc., Washington, D. C.

Rustrem—Aluminum Paint. Speco, Inc., Cleveland, Ohio.

Rust Sol—Metal Cleaner. Klem Chemicals, Inc., Dearborn, Mich.

Ryedon—Ventilators. Sioux Steel Co., Sioux Falls, S. D.

Rystrom—Fuel Oil Pumps. Polo Pump Co., Polo, Ill.

S

S C—Furnaces, Heaters. Surface Combustion, Toledo, O.

S.D.T. — Freeze Proof — Coils. John J. Nesbitt, Inc., Philadelphia.

S-E—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

SGP—Gas Conversion Burners. Security Manufacturing Co., Kansas City, Mo.

S. I. S. — Cement. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

S-L — Bar Folders, Nibblers, Slitting Machines. St. Louis Tool Co., St. Louis, Mo.

S-N—Furnaces, Oil Burners, Stokers. Scott-Newcomb, Inc., St. Louis, Mo.

Sairco—Eaves Troughs and Gutters with Fittings, Ridge Rolls and Ridging, Roofing, Metal Shingles and Tile. Southern States Iron Roofing Co., Savannah, Ga.

ST-type—Gas Burner Pilots. John Zink Co., Tulsa, Okla.

Saf-Aire—Wall Furnaces. Heating Research Corporation, Muncie, Ind.

Safe-Hi—Ladder Shoes. Rose Manufacturing Co., Denver, Colo.

Safety Circle — Motors. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Saf-T-Hot — Water Heaters. M. M. Hedges Mfg. Co., Inc., Chattanooga, Tenn.

Saginaw—Furnace. American Radiator & Standard Sanitary Corporation, Pittsburgh.

St. Clair — Circulating Heaters. Enterprise Foundry, Inc., Belleville, Ill.

St. Louis — Stoker. Ormsby-Osterman Co., St. Louis, Mo.

Sal-Mo—Cement, Insulation, Pipe Coverings. Sall Mountain Co., Chicago, Ill.

Samco — Cement. Standard Asbestos Mfg. Co., Chicago, Ill.

Samco — Floor Furnaces and Space Heaters. Samuel Stamping & Enameling Co., Chattanooga, Tenn.

Sampson—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.

Sanders — Floor Furnace. Ford Blow Pipe & Manufacturing Co., Memphis, Tenn.

Saratoga — Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Saratoga—Furnaces. Mahl Mfg. Co., Huntington Park, Calif.

Satinseote—Building Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Sauter—Time Switches. R. W. Cramer Co., Inc., Centerbrook, Conn.

Sav-A-Tank—Rust Preventive. Sudbury Laboratory, South Sudbury, Mass.

Sav-Hof — Oil Burners. Breese Corporations, Inc., Newark, N. J.

Saw-Chief—Hack Saws. Chicago Precision Machine Co., Chicago.

Sawdust Fire — Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Saw-Gun — Power Saw. Mid-States Welder Mfg. Co., Chicago, Ill.

Sax—Oil Burners. Aldrich Co., Wyoming, Ill.

Schild-Bilt—Attic Fans. Fresh Air Circulator Co., Houston, Tex.

Schmidt—Soldering Coppers, Soldering and Brazing Torches. Minn-Kota Foundry & Mfg. Co., Fargo, N. D.

Sco-Co — Roof Cement, Compounds, Paint, Roofing and Waterproofing. Southport Paint Co., Savannah, Ga.

Scotsman—Heaters. American Gas Machine Co., Albert Lea, Minn.

Screw-Tite—Nails. Independent Nail & Packing Co., Bridgewater, Mass.

Scribus-Dividus — Scribers, Dividers, Calipers, Wiggler. Nork Products Co., Los Angeles.

Scrogun — Automatic Screw Driver. Black & Decker Mfg. Co., Towson, Md.

Sea Lion — Leather Belting. Chicago Belting Co., Chicago.

Seal Master — Bearings. Stephens-Adamson Mfg. Co., Aurora, Ill.

Seal of Quality — Roofing. Columbia Steel Co., San Francisco, Calif.

Seal-Tite — Registers. Char-Gale Mfg. Co., Minneapolis, Minn.

Seamless—Furnaces. Waterman-Waterbury Co., Minneapolis, Minn.

Security — Caulking and Roofing. National Mfg. Corp., Tonawanda, N. Y.

Selemo-Dampers — Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.

Selectair—Air Conditioning Units and Oil Furnaces. S. T. Johnson Co., Oakland, Calif.

Selectric—Storage Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.

Self-Seal—Filters. Research Products Corporation, Madison, Wis.

Selis—Bearings. Royersford Foundry & Machine Co., Royersford, Pa.

Seneca — Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Sensatherm — Thermostats. Mercoid Corp., Chicago, Ill.

Sensitrol — Electrical Relays. Weston Electrical Instrument Corp., Newark, N. J.

Sentinel—Floor Furnaces. Stoker-Lad Co., Tacoma, Wash.

Sentinel—Water Heaters. General Water Heater Corp., Burbank, Cal.

Sentry—Furnaces. Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Series "H"—Coils. John J. Nesbitt, Inc., Philadelphia, Pa.

Series "W"—Coils. John J. Nesbitt, Inc., Philadelphia, Pa.

70 Serviceman—Recording Thermostat. Marsh Instrument Co., Skokie, Ill.

Shallo-Well — Floor Furnace. Oran Company, Columbus, Ohio.

Shawburnize—Gas Conversion Burners. Central States Mfg. Co., Inc., Arkansas City, Kansas.

Shawnee—Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Shelby—Tubing. National Tube Company, Pittsburgh.

Shield-Arc — Electrodes and Welders. Lincoln Electric Co., Cleveland, O.

Shipley—Air Conditioning Units. York-Shipley, Inc., York, Penn.

Shock Absorbing—Pillow Blocks. Triangle Mfg. Co., Oshkosh, Wis.

Shorty—Furnaces. John Zink Co., Tulsa, Okla.

Shower-Proof—Paint. Calbar Paint & Varnish Co., Philadelphia, Pa.

Shut-O-Vent — Louvers and Shutters. Reed Unit-Fans, Inc., New Orleans, La.

Sierra Air—Evaporative Air Conditioners. International Sales Co., San Francisco.

Sievert—Soldering Furnaces and Torches. J. A. Sanders, Fulton, N. Y.

Silbond—Electrodes. Universal Welder Corporation, Cleveland.

Silent—Furnace Blowers. Air Conditioning Equipment Co., Minneapolis, Minn.

Silent—Furnaces. Jacob Brenner Co., Fond du Lac, Wis.

Silent Air — Fans. Belanger Fan & Blower Co., Detroit, Mich.

Silentaire—Window Ventilator and Filter Units. Berger Mfg. Div., Republic Steel Corp., Canton, O.

Silent Automatic—Fans. Aircoon Industries, Detroit, Mich.

Silent Automatic—Shutters. Meyer Mfg. Co., Detroit, Mich.

Silentbiu — Gas Burners. Beck Engineering Combustion Kompany, St. Louis, Mo.

Silent Breeze—Ventilating Fans. Holcomb & Hoke Mfg. Co., Indianapolis.

Silent Korth—Oil Burners. Eckhart Mfg. Co., Inc., Union, N. J.

Silent Star—Oil Burners. Mechanical Products Co., Seattle, Wash.

Silentvane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Sil-Fos—Solder. Handy & Harman, New York, N. Y.

Silicon Bronze — Bolts. Chase Brass & Copper Co., Incorporated, Waterbury, Conn.

Silco—Fuel Oil Tank Solvent. Petroleum Solvent Corp., New York, N. Y.

Siloy-Soder—Solder. L. B. Allen Co., Inc., Chicago, Ill.

Silver-Soder — Solder. L. B. Allen Co., Inc., Chicago, Ill.

Silver Steel—Saw Blades. E. C. Atkins & Co., Indianapolis, Ind.

Simplex—Flashing. Keystone Flashing Co., Philadelphia, Penn.

Sim-trol—Barometric Dampers. Simplex Mfg. Co., Fond du Lac, Wis.

Single-Ten—Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.

Sioux—Drills, Grinders, Sanders. Albertson & Co., Inc., Sioux City, Ia.

Sirocco—Air Conditioning Units, Blowers, Fans, Ventilators, Washers. American Blower Corp., Detroit, Mich.

Sisnation—Reflective Insulation. Sisalkraft Co., Chicago.

Skil—Electric and Pneumatic Tools. Skilsaw, Inc., Chicago, Ill.

Sle-Speed — Motors. Sterling Electric Motors, Inc., Los Angeles.

Smith's — Cleat Benders. R. E. Smith, Waukegan, Ill.

Smithway — Water Storage Heaters, Stokers, Welders. A. O. Smith Corp., Milwaukee.

Smithway-Burkay — Gas Conversion Burner. A. O. Smith Corp., Toledo, Ohio.

Smokabator—Furnaces. Wheeling Furnace Corporation. Martins Ferry, Ohio.

Smokeless—Furnace. Worsham Company, Incorporated, St. Louis.

Smoothcote—Building Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Snap Action—Humidifier Valves. McDonnell & Miller, Chicago.

Snap-Clips—Spring Fastenings. Cuyahoga Spring Co., Cleveland.

Snap-Lock — Clamp Pliers. Seymour Smith & Son, Inc., Oakville, Conn.

Snaplok — Furnace Pipe. Reeves Steel & Mfg. Co., Dover, O.

Snap-Rite — Ducts, Pipe and Fittings. Gray Metal Products, Inc., Rochester, N. Y.

Snaptite—Gutter Fittings. Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.

Sno-Breze—Coils, Evaporative Coolers. Palmer Mfg. Corp., Phoenix, Ariz.

Sno-Fluf — Evaporative Cooler Mats. Palmer Mfg. Corp., Phoenix, Ariz.

Soder—Solder. L. B. Allen Co., Inc., Chicago.

Softweld—Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Solair — Heat Pump. Northwest Heating, Inc., Portland, Oreg.

Solaraire — Air Conditioning Furnace. St. Louis Furnace Mfg. Co., St. Louis, Mo.

Solar Flame—Oil Burner. East Coast Co., Boston, Mass.

Solar Flame—Oil Burners. United States Radiator Corp., Detroit, Mich.

Solder-Matic—Soldering Iron Attachment. Nelpin Mfg. Co., Long Island City, N. Y.

Solderprep — Flux for Steel. Neilson Chemical Co., Detroit, Mich.

Solex—Heat Insulating Windows. Pittsburgh Plate Glass Co., Pittsburgh.

Sol-Flux—Soldering Flux. Klem Chemical Works, Dearborn, Mich.

Solid Comfort — Furnaces. May-Fiebeger Co., Newark, O.

Soneluatic—Asphalt Paint. L. Sonneborn Sons, Inc., New York City.

Sootracide—Soot Remover. Metropolitan Refining Co., Inc., Long Island City, N. Y.

Soroco — Chimney Caps and Tops. Southbridge Roofing Co., Southbridge, Mass.

So Salts — Flux. Turco Products, Inc., Los Angeles, Calif.

Southaire—Pipe Fittings, Stokers, Furnaces. E. E. Souther Iron Co., St. Louis, Mo.

Southern-Aire—Space Heaters. Southern Aircraft Co., Garland, Tex.

Southerner — Air Conditioning Furnaces. Norman Products Co., Inc., Columbus, Ohio.

Southerner—Air Conditioners. Southern Air Conditioning Mfg. Co., Fort Worth, Tex.

Sovabend — Dehumidifier. Socony-Vacuum Oil Co., New York City.

Sovaklor—Metal Protecting Paint. Socony Paint Products, New York, N. Y.

Sovalex—Metal Protecting Paint. Socony Paint Products, New York, N. Y.

Spaceaver—Heating Unit. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.

Spartan — Water Heaters. Continental Water Heater Co., Ltd., Los Angeles.

Special Hi-Duty—Copper Tube Fittings. Imperial Brass Mfg. Co., Chicago, Ill.

Special X—Flux. Industrial Service Laboratories, Milwaukee, Wis.

SpecO — Soldering Flux. Pfanstiehl Chemical Co., Waukegan, Ill.

Speed Clamps—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.

Speed Clips — Spring Steel Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.

Spee Dee — Coils. Air Controls, Inc., Cleveland, O.

Speed Grips—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.

Speed-heat — Furnaces. Marshall Furnace Co., Marshall, Mich.

Speedmaster—Water Heaters. Handley-Brown Heater Co., Jackson, Mich.

Speed Nuts — Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.

Speed - Trol — Transmissions, Motors. Sterling Electric Motors, Inc., Los Angeles.

Speedweld — Mild Steel Welding Rods. Trindl Products, Ltd., Chicago.

Sphinx — Gas Burners and Furnaces. C. L. Bryant Corporation, Cleveland.

Sphinxette—Burners and Furnaces. C. L. Bryant Corp., Cleveland, Ohio.

Spinner—Ventilators. Inland Steel Products Co., Milwaukee.

Spiralock—Pulleys. Scientiae Tool Co., Dayton, O.

Spiratube—Flexible Duct Connections and Non-Metallic Fittings. Flexible Tubing Corp., Branford, Conn.

Spirovane—Ventilating Fans. Western Blower Co., Seattle, Wash.

Spitfire—Water Heater. Security Mfg. Co., Kansas City, Mo.

Spongex—Vibration Isolating Pads. Sponge Rubber Products Co., Shelton, Conn.

Spot-Aire—Room Type Air Conditioning Units. Drayer-Hanson, Inc., Los Angeles, Calif.

Sprague—Furnaces. Katelman Foundry & Mfg. Co., Council Bluffs, Ia.

Spray-Acoustic — Insulation. Sprayo-Flake Company, Chicago.

Spray-Cote — Insulation. Sprayo-Flake Company, Chicago.

Sprayco—Spray Guns, Humidifiers, Nozzles, Air Washers. Spray Engineering Co., Somerville, Mass.

Sprayit—Paint Guns, Humidifiers, Nozzles. Electric Sprayit Co., Sheboygan, Wis.

Spra-Rite — Nozzles. Binks Mfg. Co., Chicago, Ill.

Spraymaster—Paint Spray Guns. Portable Electric Tools, Inc., Chicago, Ill.

Sprayweldor—Metal Spray Guns. Wall Colmonoy Corp., Detroit.

Spunsteel—Pulleys. Spun Steel Corporation, Canton, Ohio.

Stable-Arc — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Stackmaster — Furnace Regulator. Campbell Eng. Co., Appleton, Wis.

Stack-O-Meter—CO_2 Analyzer. Davis Emergency Equipment Co., Newark, N. J.

Stainland — Electrodes. Arcos Corporation, Philadelphia, Pa.

Stainless Heat — Furnaces. Heating Specialties Co., Baltimore, Md.

Stainoloy—Electrodes. Acme Electric Welder Co., Los Angeles.

Stainweld — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Sta-Lok — Prefabricated Ducts and Duct Fittings. Chicago Furnace Supply Co., Chicago, Ill.

Stamco—Furnace Pipe, Fittings. Cincinnati Stamping & Furnace Co., Cincinnati.

Stamco—Sheet and Plate Machinery. Streine Tool & Mfg. Co., New Bremen, Ohio.

Standard I.F.B.—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.

Standard—Furnace. Farris Furnace Co., Springfield, Ill.

Standard — Furnaces. Home Furnace Co., Holland, Mich.

Standard—Furnaces. Williamson Heater Company, Cincinnati.

Standard — Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Standard—Water Heaters. FauceHot Heater Co., LaPorte, Ind.

Standco — Pillow Blocks. Standard Pressed Steel Co., Jenkintown, Pa.

Standforated—Grilles. Standard Stamping & Perforating Co., Chicago, Ill.

Star—Furnace Chain. Turner & Seymour Mfg. Co., Torrington, Conn.

Star—Hack Saw Blades. Clemson Bros., Inc., Middletown, N. Y.

Star—Oil Burners. Mechanical Products Co., Seattle, Wash.

Star—Space Heaters. Houston Blow Pipe & Sheet Metal Works, Houston, Texas.

Statick — Ventilators. Hirschmann-Pohle Co., Inc., LeRoy, N. Y.

Staxauster—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Staynew—Air Filters. Dollinger Corporation, Rochester, N. Y.

Steel-Bound Cork—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.

Steel Cable—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, O.

Steel City—Furnaces. Ruby Management Co., Pittsburgh, Penn.

Steelfab—Foot Shears. Highland Engineering Co., Santa Monica, Calif.

Steel-Fin — Heating Coils. New York Blower Co., Chicago, Ill.

Steel Mixture—Refractories. McLeod & Henry Co., Inc., Troy, N. Y.

Steel Weld—Furnaces. Jacob Brenner Co., Fond du Lac, Wis.

Steelweld — Brakes, Presses and Dies, Shears. Cleveland Tramrail Div., Cleveland Crane & Eng. Co., Wickliffe, Ohio.

Sterilator—Germicidal Lamps. Domestic Devices, Cleveland.

Sterling — Evaporative Coolers and Compressors. Reynolds Mfg. Co., Springfield, Mo.

Sterling — Water Heaters. Waldorf Heater Company, Philadelphia.

Sterling Bender—Beading Machines. F. L. Robertson, Buffalo, N. Y.

Steward — Presses and Dies, Benders. Ward Machinery Co., Chicago, Ill.

Stic-Tite—Cement. Refractory & Insulation Corp., New York, N. Y.

Stokabilt — Air Conditioning Stoker Furnaces. American Foundry & Furnace Co., Bloomington, Ill.

Stok-A-Fire—Furnaces, Stokers. Automatic Firing Corporation, St. Louis.

Stok-A-Timer — Stoker Controls. Mercoid Corp., Chicago, Ill.

Stoker-Disk—Baffles. Insulation & Refractories Co., Williamson, N. Y.

Stoker Fire — Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Stokerator — Domestic Stokers. Northern Steel & Stoker Corp., Peoria, Ill.

Stokerelay—Relays. Minneapolis - Honeywell Regulator Co., Minneapolis, Minn.

Stokol - Hydraulic — Stokers. Stokol Stoker Co., Inc., Dayton, Ohio.

Stokol - Mercury — Stokers. Stokol Stoker Co., Inc., Dayton, Ohio.

Stonewall — Asbestos - Cement Board. Ruberoid Co., New York, N. Y.

Stop-It—Waterproofing. Tamms Industries Inc., Chicago, Ill.

Storm King—Furnace Pipe, Smoke Pipe, and Fittings. Ohio Valley Hardware & Roofing Co., Metal Manufacturing Div., Evansville, Ind.

Storm-Pruf—Oil Burner Vent Caps. Bearlee Products Co., Green Bay, Wis.

Storm-Seal—Fittings. Lyon-Conklin & Co., Inc., Baltimore.

StormSeal — Roofing Steel. Columbia Steel Co., San Francisco, Calif., and American Steel and Wire Company, Cleveland.

Stormtight—Roof Cement and Paint. L. Sonneborn Sons, Inc., New York, N. Y.

Stowaway — Attic Furnaces. Lennox Furnace Co., Marshalltown, Ia.

Strato-Limiator—Air Diffusers. Wilster, Inc., Cleveland, O.

Stream-Flo—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Streamline—Ridge Ventilators. H. H. Robertson Co., Pittsburgh, Pa.

Streamline—Tubing and Fittings Mueller Brass Co., Port Huron, Mich.

Streamlined—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.

Streamlined — Oil Burners. Shedlov Oil Burners, Inc., Minneapolis.

Streamliner—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.

Streekas — Register Packing. Excel Heating & Air Conditioning Co., Chicago, Ill.

Strongbarn—Corrugated Steel Roofing. Granite City Steel Co., Granite City, Ill.

Stronghold—Nails. Independent Nail & Packing Co., Bridgewater, Mass.

Stubby—Floor Furnace. Holly Mfg. Co., Pasadena, Calif.

Stud-Pak—Insulation. United States Mineral Wool Co., South Milwaukee, Wis.

Sturdybender — Presses, Brakes. Cyril Bath & Co., Cleveland, O.

Sullivan—Draft Stabilizer. Cole-Sewell Engineering Co., Minneapolis.

Sunbeam — Furnaces, Blower - Filters, Oil Burners, Heaters and Humidifiers. American Radiator and Standard Sanitary Corp., Pittsburgh, Pa.

Sun-Blaze—Furnaces. Harvey-Whipple, Inc., Springfield, Mass.

Sunburst—Gas Burners. Taylor Appliance & Mfg. Co., Royal Oak, Mich.

Sun Fuel Master—Furnaces. J. V. Patten Co., Sycamore, Ill.

Super — Drill Grinders. Crandall Mfg. Co., Los Angeles.

Super—Hangers and Fittings. Royal-Apex Mfg. Corp., Brooklyn, N. Y.

Super — Heaters. Evans Products Co., Detroit.

Super—Plastic Furnace Lining. Walsh Refractories Corp., St. Louis, Mo.

Super — Pneumatic Tools. Keller Tool Company, Grand Haven, Mich.

Superair — Air Conditioning Furnaces. St. Louis Furnace Mfg. Co., St. Louis, Mo.

Superair—Blower-Filter Units. The Majestic Co., Huntington, Ind.

Super Air Screws — Ventilating Fans. Marathon Electric Mfg. Corp., Wausau, Wis.

Super Cycle—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.

Superdraft—Blowers. Perfection Stove Co., Cleveland.

Superfelt—Insulation. Johns-Manville. New York City.

Superfex—Furnaces. Heaters. Perfection Stove Co., Cleveland, O.

Superfin—Furnaces. American Fdry. & Furnace Co., Bloomington, Ill.

Super Firma — Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., Le-Roy, N. Y.

Superflux—Soldering Flux. Paul Lewis Laboratories, Inc., Milwaukee, Wis.

Super-Heat—Gas Burners. Brown-Hart Engineering Corp., Hazel Park, Mich.

Superhot—Water Heaters. SuperhO Mfg. Co., Los Angeles.

Superior — Enamels. Blue Ridge Talc Co., Inc., Henry, Va.

Superior—Blowers. American Foundry & Furnace Co., Bloomington, Ill.

Superior—Storage Water Heaters. Bastian-Morley, Inc., LaPorte, Ind.

Superior—Water Heaters. Crane Co., Chicago, Ill.

Super-Jet—Soldering Torches. Fusion Engineering, Cleveland.

Superlay — Electrodes. Acme Electric Welder Co., Los Angeles.

Supermatic — Compressors. Servel, Inc., Evansville, Ind.

Super - Nickel — Fittings. American Brass Co., Waterbury, Conn.

Super Plastic—Furnace Lining. Walsh Refractories Corp., St. Louis, Mo.

Super-Por-Seal — Waterproofing. Truscon Laboratories, Detroit.

Super Red Streak — Furnace Cleaners. National Super Service Co., Toledo, O.

Super Saw—Power Saws. RCS Tool Sales Corp., Joliet, Ill.

Super Sioux — Ventilators. Sioux Steel Co., Sioux Falls, S. D.

Super 66—Insulation. Eagle-Picher Co., Cincinnati, Ohio.

Super Speed—Mouldings and Trim. Appleton Supply Co., Inc., Appleton, Wis.

Super - Spred — Stokers. Wm. Bros. Boiler & Mfg. Co., Minneapolis.

Super Steel — Furnaces. Williamson Heater Company, Cincinnati, Ohio.

Supersteel—Furnaces. Kalamazoo Stove & Furnace Co., Kalamazoo, Mich.

Supertemp — Insulation. Eagle-Picher Co., Cincinnati, Ohio.

Super - Thermo — Refractory. Chicago Fire Brick Co., Chicago, Ill.

Super-X—Roofing Nails. Republic Steel Corporation, Cleveland, O.

Super X—Sheets. Western Brass Mills Div., Olin Industries, Inc., East Alton, Ill.

Supreme — Enamels. Blue Ridge Talc Co., Inc., Henry, Va.

Supreme—Furnaces. American Furnace & Foundry Co., Milan, Mich.

Supreme—Furnaces, Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.

Supreme — Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Sure Draft—Chimney Tops. H. C. Little Burner Co., Inc., San Rafael, Calif.

Suseli—Ducts, Fittings, Furnace and Smoke Pipe and Fittings. Henry Furnace Company, Medina, Ohio.

Sure-Foot—Ladder Base. Akron Steel Sales, Inc., Akron, O.

Surety—Roofing Felt. Philip Carey Mfg. Co., Cincinnati.

Sureweld—Arc Welding Electrodes. National Cylinder Gas Co., Chicago, Ill.

Surfaceweld — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

SuVencer — Clad Sheets. Superior Steel Corp., Pittsburgh.

Swanee — Galvanized Shingles. Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.

Sylphon—Controls, Damper Regulators, Thermostats. Fulton Sylphon Co., Knoxville, Tenn.

Symentrex—Waterproofing. A. C. Horn Co., Inc., Long Island City, N. Y.

Symonds—Registers. Front Rank Furnace Co., Div., Liberty Foundry Co., St. Louis, Mo.

Synchron — Stoker Controls, Relays, Switches. Industrial Engineering Corp., Terre Haute, Ind.

Synchron "600"—Motors. Hansen Mfg. Co., Inc., Princeton, Ind.

Syncrogear—Motors. U. S. Electrical Motors, Inc., Los Angeles.

T

Table-Top—Water Heaters. Handley-Brown Heater Co., Jackson, Mich.

Tag—Controls, Humidistats, Hygrometers, Recorders, Psychrometers, Thermometers, Thermostats. C. J. Tagliabue Corp., Newark, N. J.

Tamanite — Metal Conditioner. Tamms Industries Inc., Chicago, Ill.

Tamco—Ventilators. Tiffin Art Metal Co., Tiffin, Ohio.

Tamplco—Filters. Chicago Filter Co., Joliet, Ill.

Tam - Putty — Caulking Compound. Tamms Industries Inc., Chicago, Ill.

Tamtex—Paint. Tamms Industries Inc., Chicago, Ill.

Tank-Kleen—Solvent. Celco Corporation, New York City.

Tapgun—Portable Electric Tapper. Black & Decker Mfg. Co., Towson, Md.

Tarbestos—Roofing Paint. Philip Carey Mfg. Co., Lockland, Ohio.

Tate—Furnaces. State Steel Products, Inc., Los Angeles.

Tee Joint—Pipe Fittings and Accessories. Inland Steel Products Co., Milwaukee.

Teg Conditioner—Blower-Filter Units. National Air Conditioning, Inc., Johnstown, Penn.

Telemaster — Relays. Tork Clock Company, Inc., Mount Vernon, N. Y.

Tem-Clock — Controls. Penn Electric Switch Co., Goshen, Ind.

Temco — Furnaces. Tennessee Enamel Mfg. Co., Nashville, Tenn.

Temlok — Insulation. Armstrong Cork Co., Lancaster, Pa.

Tempmaster—Thermostats. Crown Controls Company, Inc., New Bremen, Ohio.

Tempoint — Thermometer. Bacharach Industrial Instrument Co., Pittsburgh, Penn.

Tempotool—Powder Operated Drills. Tempo Products Co., Cleveland.

Tempscribe—Portable Temperature Recorder. Bacharach Industrial Instrument Co., Pittsburgh.

Temtrol — Thermostats. Penn Electric Switch Co., Goshen, Ind.

Tennessee—Steel Roof Decking. Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

10-Plastic—Caulking Compounds. Quigley Co., Inc., New York, N. Y.

Tension-Lap — Roofing Steel. Inland Steel Company, Chicago.

Tenzulate—Insulation. Tennessee Products Corp., Nashville, Tenn.

Texamo—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Texrope—V-Belts. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Thaxco — Furnace Cement. The Armstrong Company, Detroit, Mich.

Thermalfuel — Furnaces. Beck Engineering Combustion Kompany, St. Louis, Mo.

Thermag—Skylights. J. Merrill Richards, Boston.

Thermaload—Electrical Relays. Monitor Controller Co., Boston, Mass.

Thermaster—Furnaces. Thatcher Furnace Company, Garwood, N. J.

Thermatic — Gas Conversion Burners. Wayne Home Equipment Co., Inc., Fort Wayne, Ind.

Thermatic—Water Heaters. FauceHot Heater Co., LaPorte, Ind.

Thermatube—Duct Fittings. Flexible Tubing Corp., Branford, Conn.

Thermch—Coils. Peerless of America, Inc., Chicago, Ill.

Thermidaire—Air Conditioning Units, Blowers, Coils, Fans, Furnaces, Louvres & Shutters. E. K. Campbell Heating Co., Kansas City, Mo.

Therme—Furnaces. American Furnace Co., St. Louis, Mo.

Thermoanemometer — Anemometer, Willson Products, Inc., Reading, Pa.

Therme-Blast — Gas Burners. Rapid Heat Corporation, Detroit.

Thermoblor — Furnaces. Prat - Daniel Corp., East Fort Chester, Conn.

Thermodraft—Draft Regulators. No-No Specialty Co., Cleveland.

Thermo-Draulic — Controls, Damper Motors and Regulators. Perfex Corporation, Milwaukee, Wis.

Thermo-Drip — Humidifier. Automatic Humidifier Co., Cedar Falls, Ia.

Thermodrive — Variable Speed Pulleys. Webster Electric Co., Racine, Wis.

Thermogas — Furnaces. Beck Engineering Combustion Kompany, St. Louis, Mo.

Thermo-Grip—Soldering Coppers. Ideal Industries, Inc., Sycamore, Ill.

Thermo-Humidigraph — Humidity Recorders. Bristol Co., Waterbury, Conn.

Thermoll — Furnaces. Beck Engineering Combustion Kompany, St. Louis, Mo.

Thermo Lo—Brazing Flux. Farrelloy Co., Philadelphia, Pa.

Thermolux Standard Super — Water Heaters. Los Angeles Gas Appliance Co., Los Angeles.

Thermolux Super—Water Heaters. Los Angeles Gas Appliance Co., Los Angeles.

Thermopilot — Controls. General Controls Co., Glendale, Calif.

Thermopane—Windows. Libby-Owens-Ford Glass Co., Toledo, O.

Thermoseal—Insulating Windows. F. C. Russell Co., Cleveland, Ohio.

Thermotex B — Insulating Cement, Waterproofing. Philip Carey Mfg. Co., Cincinnati.

Thermotile—Insulation. Coast Insulating Corp., Los Angeles, Calif.

Therm-otrol—Thermometers. Wheelco Instruments Co., Chicago, Ill.

Thermo-Treiation—Roof Cooler. April Showers Company, Washington, D. C.

Thin-Man—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Thor—Electric and Pneumatic Buffers, Nibblers, Hammers, Tools. Independent Pneumatic Tool Co., Aurora, Ill.

3-M—Electric Grinders, Buffers, etc. Minnesota Mining & Manufacturing Co., St. Paul.

Three-Phase — Welders. Sciaky Bros., Chicago.

370 Special — Paints. Thompson & Co., Pittsburgh, Pa.

Thrift—Time Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Throway—Steel Wool Filters. American Air Filter Co., Inc., Louisville, Ky.

Tik Wheat—Pipe Covering Paste. Clark Stek-O Corp., Rochester, N. Y.

Tilco-Fin—Coils. David E. Kennedy, Inc., Brooklyn.

Tile Roofing — Roof Cement. Philip Carey Mfg. Co., Cincinnati.

Tillery's — Furnace Clock. Little Janitor Furnace Clock Co., New York, N. Y.

Timercold—Time Switch. Mercoid Corp., Chicago, Ill.

Timerelay — Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Time-O-Switch—Time Switches. Minneapolis-Honeywell Regulator Co., Minneapolis.

Time-Saver—Damper Quadrants. Goose Mfg. Co., Milwaukee, Wis.

Ti-Namel — Vitreous Enameling Alloy Steel Sheets. Inland Steel Co., Chicago.

Tinsey — Solder. Farrelloy Co., Inc., Philadelphia.

Tinner's Red—Paint. Pittsburgh Plate Glass Co., Pittsburgh.

Tinol—Soldering Flux. American Solder & Flux Co., Philadelphia, Pa.

Tite-Lite—Caulking Compound. Truscon Laboratories, Detroit, Mich.

Titelock—Fittings and Accessories for Conductor, Eaves Trough and Gutter, Furnace Pipe. Inland Steel Products Co., Milwaukee, Wis.

TiteSeal—Caulking Compounds. Radiator Specialty Co., Charlotte, N. C.

Toastmaster—Electric Water Heaters. McGraw Electric Co., Chicago, Ill.

Tobin Bronze—Plates and Welding Rod. American Brass Co., Waterbury, Conn.

Toledo—Presses and Dies. E. W. Bliss Company, Toledo, Ohio.

Toncan Iron — Roofing, Sheets, Republic Steel Corp., Cleveland, O.

Toolmaster — Grinders. Brown-Brockmeyer Co., Dayton, O.

Toolweld — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Torchmaster—Torches. Sully Engineering, Ltd., Los Angeles, Calif.

Torchweld—Torches. National Cylinder Gas Co., Chicago.

Toridaire—Furnaces. Fraser and Johnston Co., San Francisco, Calif.

Toridmaster — Conversion Burners. Modern Controls Corporation, Detroit.

Torkmaster—Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Torkotherm—Thermostats. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Tornado — Furnace Vacuum Cleaners. Breuer Electric Mfg. Co., Chicago, Ill.

Torrid — Soldering Furnaces and Torches. Geo. W. Disner Mfg. Co., Chicago, Ill.

Torrid-Cast — Refractories Walsh Refractories Corp., St. Louis, Mo.

Torrid Zone — Furnaces. Lennox Furnace Co., Marshalltown, Ia.

Totalume—Aluminum Paint. Wilbur & Williams Co., Boston.

Totrust — Paints, Enamels. Wilbur & Williams Co., Boston.

Tramrail—Hoists, Monoralls. Cleveland Tramrail Div., Cleveland Crane & Engr. Co., Wickliffe, Ohio.

Transite—Duct Board, Pipe and Fittings. Johns-Manville, New York, N. Y.

Transite Conduit—Ducts and Duct Fittings. Johns-Manville, New York City.

Transite Kordnct—Ducts and Duct Fittings. Johns-Manville, New York City.

Transparent—CO2 Analyzers. F. W. Dwyer Mfg. Co., Chicago, Ill.

Trapit—Fuel Oil Filters. Automatic Products Co., Milwaukee, Wis.

Trentweld—Steel Tubing. Crucible Steel Co. of America, New York, N. Y.

Triangle—Water Heaters. Day & Night Div., Affiliated Gas Equipment Co., Inc., Monrovia, Calif.

Triblee—Hoists. Ford Chain Block Div., American Chain and Cable Co., Inc., York, Penn.

Triclene—Metal Cleaner. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

Trico — Furnaces. Tri-State Heating Supply Co., Fort Wayne, Ind.

Tricoseal — Waterproofing. American Fluresit Co., Cincinnati, Ohio.

Tri-Core—Flux, Solder. Alpha Metals, Incorporated, Brooklyn, N. Y.

Tri-Flex—Grilles, Registers. Tuttle & Bailey, Inc., New Britain, Conn.

Tri-Flux — Soldering Flux. Wolfe-Kote Co., Sheboygan, Wis.

Trimatic—Gas Burner Pilots. Lowell & Grayson Mfg. Co., Monrovia, Calif.

Trimmer Dampers — Barometric Draft Control. Campbell Engineering Co., Appleton, Wis.

Trimtherm—Thermostats. General Controls Co., Glendale, Calif.

Triple A — Paints, Enamels and Lacquers, Compounds. Quigley Co., Inc., New York, N. Y.

Triple Drain—Channel Roofing. Republic Steel Corp., Cleveland, O.

Tripl-Lock—Roofing Nails. The Denniston Co., Chicago, Ill.

Tripl-ife—Furnaces. Williamson Heater Co., Cincinnati, O.

Tri-Rib — Steel Roof Deck. Wheeling Corrugating Co., Wheeling, W. Va.

Tri-Snips—Multi-purpose Snips. Roto-Table Co., Dayton, Ohio.

Tri-trol—Thermostats. Marsh Heating Equipment Co., Skokie, Ill.

Triumph — Water Heaters. Koil-Les Heater Co., Geneva, Ill.

Trojan—Furnaces and Stokers. Auburn Burner, Co., Auburn, Ind.

TroLoire—Wall Furnaces. Form-Weld Co., Inc., San Francisco.

Tropic Breeze — Furnaces. Dalsen Tool & Manufacturing Co., Detroit, Mich.

Truliradiant — Gas Burners. Sullivan Valve & Engineering Co., Butte, Mont.

Trunkline—Ducts and Duct Fittings. Norwalk Air Conditioning Corp., South Norwalk, Conn.

Tuberator — Furnaces. Wheeling Furnace Corp., Martins Ferry, Ohio.

Tube-O-Flux—Flux, Solder. American Products Corp., Chicago.

Tuffaloy—Electrodes. Welding Sales & Engineering Co., Detroit.

Tuffy — Power-Arm Drivers. Swallow Airplane Co., Wichita, Kans.

Tuf-Flex—Hack Saw Blades. Millers Falls Company, Greenfield, Mass.

Tulox—Plastic Tubing. Extruded Plastics, Inc., Norwalk, Conn.

Turbine Rotary—Ventilators. Western Engineering & Manufacturing Co., Los Angeles.

Turbo—Air Washers. Bayley Blower Company, Milwaukee, Wis.

Turb-O-Tube—Furnace. Associates Engineering Co., Buffalo, N. Y.

Turbovane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Tweeotong—Electrode Holders. Tweco Products Co., Wichita, Kans.

Twin Contact — Controls, Relays, Thermostats. Perfex Corporation, Milwaukee, Wis.

Twin Control—Oil Burner. H. J. Hueller Manufacturing Company, Inc., Brooklyn.

Twindow—Heat Insulating Windows. Pittsburgh Plate Glass Co., Pittsburgh, Penn.

Twin-Eight—Space Heaters. Allen Manufacturing Co., Inc., Nashville, Tenn.

Twinfuel—Gas-Oil Burners and Furnaces. Norman Products Co., Inc., Columbus, Ohio.

Twin-Fyr—Oil Burner. Breeze Corporations, Inc., Newark, N. J.

Twin Rail — Fan Base. Korfund Co., Inc., Long Island City, N. Y.

Two-Drain—Steel Roofing. Inland Steel Products Co., Milwaukee.

Two-Way—Pneumatic Hammer. Coast Pneumatic Tool Co., Los Angeles.

Tygon—Metal Protecting Paint. Ornamental Moulding. U. S. Stoneware Co., Akron, Ohio.

Tyl-Lyke — Steel Roofing and Siding. Continental Steel Corp., Kokomo, Ind.

Tymotherm — Thermostats. Tork Clock Company, Inc., Mount Vernon, N. Y.

Type X — Stainless Cleaner. Turco Products, Inc., Los Angeles, Calif.

Typhoon—Air Conditioners, Coils. Ice Air Conditioning Co., Inc., Brooklyn.

U

U-G-L—Furnace Cement. United Gilsonite Laboratories, Scranton, Pa.

UMCO—Furnaces. Union Manufacturing Co., Boyertown, Pa.

USG—Built-Up Roofing and Roof Cement and Paint. United States Gypsum Co., Chicago, Ill.

U.S.S. — Nails, Roofing, Sheets, Plates, Wire. Subsidiaries, U. S. Steel Corporation.

U.S.S.—Stainless Steel Tubing. National Tube Co., Pittsburgh, Penn.

U.S.S. American—Nails and Wire. American Steel & Wire Co., Cleveland, Ohio.

U.S.S. Carilloy—Alloy Plates. Carnegie-Illinois Steel Corp., Pittsburgh, Pa.

U.S.S. Columbia—Roofing, Sheets, Columbia Steel Co., San Francisco, Calif.

U.S.S. Copperweld—Subsidiaries U. S. Steel Corp., Pittsburgh, Penn.

U.S.S. Cor Ten—Steel Plates. Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

U.S.S. Paintbond—Sheets. Carnegie-Illinois Steel Corporation, Pittsburgh, Pa.

U.S.S. Stormseal—Steel Roofing. Carnegie-Illinois Steel Corp., Pittsburgh, Pa.

U.S.S. Tennessee—Roofing. Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Uclite—Coatings and Paint. United Chromium, Incorporated, New York City.

U-Loy—Sheets. Republic Steel Corp., Cleveland, O.

U-Set—Snips and Shears. W. H. Compton Shear Co., Newark, N. J.

"U" Tube—Water Heaters. Handley Brown Heater Co., Jackson, Mich.

Unichrome—Coating. United Chromium, Incorporated, New York City.

Uniclosed—Motors. U. S. Electrical Motors, Inc., Los Angeles.

Uniduct—Prefabricated Ducts. General Corporation, Minneapolis, Minn.

Unifill—Insulation. Robinson Insulation Co., Great Falls, Mont.

Uni-Fin—Grilles and Warm Air Registers. Barber-Colman Co., Rockford, Illinois.

Unifiare—Copper Tube Fittings. Scovill Mfg. Co., Waterville Div., Waterville, Conn.

Uni-So—Duct Turning Vanes, Faces, Grilles and Registers. Barber-Colman Company, Rockford, Ill.

Uniflow—Oil Burners. Ace Eng. Co., Chicago.

Unilloy—Stainless Steel Sheets. Universal-Cyclops Steel Corp., Bridgeville, Pa.

Unipack—Blowers, Exhausters. American Machine Products Co., Marshalltown, Iowa.

Unique—Air Conditioning Furnace. Excelsior Steel Furnace Co., Chicago, Ill.

Unishear—Portable Electric Shears. Stanley Electric Tool Div., The Stanley Works, New Britain, Conn.

Unisorb—Bases and Pads. Felters Co., Boston, Mass.

Uniaire—Air Conditioning Units for Stores. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Unitaire—Gas Furnaces. Hammel Radiator Eng. Co., Los Angeles, Calif.

Universal—Angle Benders. Hossfeld Mfg. Co., Winona, Minn.

Universal—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.

Universal Coating—Waterproofing. Philip Carey Mfg. Co., Lockland, Ohio.

Uni-wash—Dust Collectors. Newcomb Eng. Co., Grand Rapids, Mich.

Unzid—Damper Quadrants. Parker-Kalon Corp., New York, N. Y.

Upson—Rivets, Bolts. Republic Steel Corp., Cleveland, O.

usAIRco—Air Conditioning Units, Blowers and Blower-Filter Units, Coils, Fans, Grilles, Washers and Blower Wheels. U. S. Air Conditioning Corp., Minneapolis.

Utilifurnace—Air Conditioning Furnaces. Ingersoll Steel & Disc Div., Chicago.

Utility—Fan Ventilator. Arex Company, Chicago.

V

V-Crimp—Roofing. Inland Steel Products Co., Milwaukee.

V-Drain—Roofing. Tennessee Coal Iron & Railroad Co., Birmingham, Ala.

V-Vent—Ventilators. Aeolus Dickinson, Chicago, Ill.

Vacker—Furnace Vacuum Cleaners. Black & Decker Mfg. Co., Towson, Md.

Valcalox—Damper Regulators. Young Regulator Co., Cleveland, O.

Valdura—Caulking Compounds, Paint. American-Marietta Co., Chicago, Ill.

Valley Forge—Cement. Ehret Magnesia Mfg. Co., Valley Forge, Pa.

Vanatta Kwikheat—Electric Soldering Iron. Kwikheat Mfg. Co., Glendale, Calif.

Vance Duratite—Skylights. E. Van Noorden Co., Boston.

Vance Superflo—Ridge Ventilators. E. Van Noorden Co., Boston.

Vance Syphon—Ventilators. E. Van Noorden Co., Boston.

Vance Uplast—Ventilators. E. Van Noorden Co., Boston.

Vapaglas—Humidifier Evaporating Plates. Skuttle Mfg. Co., Detroit, Mich.

Vaporaire—Air Conditioners. Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.

Vapor-Oil—Burners and Furnaces. Automatic Furnace Co., Lansing, Mich.

Vaporseal—Waterproofing. Angier Corp., Framingham, Mass.

Varidrive—Motors. U. S. Electrical Motors, Inc., Los Angeles.

Vari-Pitch—Speed Changers. Allis-Chalmers Mfg. Co., Milwaukee.

Veelos—Adjustable V-Belts. Manheim Mfg. & Belting Co., Manheim, Pa.

Velometer—Air Velocity Meters. Illinois Testing Laboratories, Inc., Chicago, Ill.

Ventahl—Fans. Mahl Mfg. Co., Huntington Park, Calif.

Vent-Air—Blowers. Fried Air-Kool Co., Detroit.

Ventair—Fans. West Wind Corporation, Seattle.

Ventalarm—Fuel Tank Signal Gauge. Scully Signal Company, Cambridge, Mass.

Ventfab—Flexible Duct Connections. Iden Co., Chicago, Ill.

Ventilette—Fans. Diehl Manufacturing Company, Somerville, N. J.

Vent-O-Matic—Kitchen Exhaust Fans. Simpson Screen Co., Oakland, Calif.

Ventrola—Ventilators and Fans. National Appliance Co., Detroit, Mich.

Ventube—Rubberized Tubing. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

Ventura—Fans, Ventilators. American Blower Corp., Detroit, Mich.

Venturi-Flo—Air Diffusers, Ceiling Ventilators. Barber-Colman Company, Rockford, Ill.

Vermiculite—Insulation. International Vermiculite Co., Girard, Ill.

Vernois—Furnaces and Heaters. Mt. Vernon Furnace and Mfg. Co., Mt. Vernon, Ill.

Vernon—Punch Presses. Ran Corporation, Richmond, Calif.

Versalend—Electrodes. Arcos Corporation, Philadelphia.

Versa-Tool—Portable Electric Drill. York Electric and Machine Co., York, Pa.

Verti-Bay—Coils. Vilter Manufacturing Co., Milwaukee.

Vibra-Cork—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.

Vibro-Bars—Vibration Isolating Bases. Korfund Co., Inc., Long Island City.

Vibro Dampers—Vibration Isolating Bases. Korfund Co., Inc., Long Island City.

Vibro-Insulators—Vibration Insulating Pads. B. F. Goodrich Co., Akron, O.

Vibro-Isolator—Vibration Isolating Bases. Korfund Co., Inc., Long Island City.

Victor—Blower-Filter Units, Furnaces, Oil Burners, Stokers. Hall-Neal Furnace Co., Indianapolis, Ind.

Victor-Bilt—Fan Blades. Victor Electric Products, Inc., Cincinnati.

Victorgas—Gas Units. Hall-Neal Furnace Co., Indianapolis, Ind.

Victor Jumbo—Large Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.

Victoroil—Air Conditioning Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.

Victory—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Victron—Fans, Motors. Victor Electric Products, Inc., Cincinnati.

Vigoraire—Furnaces. Marshall Furnace Co., Marshall, Mich.

Vikimatic—Furnaces. Viking Manufacturing Corporation, Cleveland.

Vincul—Rust Remover. Protective Coatings, Inc., Detroit.

Vinflame—Oil Burner Controls. Mercoid Corp., Chicago, Ill.

Vise-Grip—Clamps. Petersen Mfg. Co., Inc., DeWitt, Nebr.

Visi-Draft—Draft Gauge. F. W. Dwyer Mfg. Co., Chicago.

Vi-Speed—Pneumatic Hammer. Van Products Co., Erie, Pa.

Vita-Aire—Ozone Apparatus. A & J. Co., Chicago.

VitaRay—Space Heaters. Quad Stove Mfg. Co., Columbus, O.

Vitra-Carlite—Enamels and Lacquers. Hilo Varnish Corp., Brooklyn, N. Y.

Vitreamel—Enameled Sheets. Carnegie-Illinois Steel Corporation, Pittsburgh.

Vitricel—Furnace Cement. Philip Carey Mfg. Co., Cincinnati.

Vitro Flame—Oil Burners. Kreznor Stamm Mfg. Co., Palisades Pk., N. J.

Vitroliner—Chimney Linings, Vent and Flue Pipe and Fittings. Condensation Engineering Corp., Chicago, Ill.

Volcano—Chimney Caps and Tops, Ventilators. Iwan Brothers, South Bend, Ind.

Volocitrol—Air Control Vanes. Barber-Colman Co., Rockford, Ill.

Vortex—Furnace Vacuum Cleaners. Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.

Vortex—Spray Nozzles. Phillips Cooling Tower Co., Inc., New York City.

Vulcan—Stokers. Canton Stoker Corp., Canton, O.

Vulcanite—Roofing, and Roofing Cement. Certain-teed Products Corp., New York City.

Vulcatex—Caulking and Glazing Compounds. A. C. Horn Co., Inc., Long Island City, N. Y.

Vulco—V-Belts and Pulleys. Gates Rubber Co., Denver, Colo.

W

W—Sheets. Wheeling Corrugating Co., Wheeling, W. Va.

WAW—Tools. W. A. Whitney Mfg. Co., Rockford, Ill.

W. O. No 1—Rust Preventive Chemicals. Turco Products, Inc., Los Angeles, Calif.

WR—Controls. White-Rodgers Electric Company, St. Louis.

Waltham—Oil Burners. Stanley C. Paterson, Boston, Mass.

Warco—Refractories. Walsh Refractories Corp., St. Louis, Mo.

Warco—Presses and Press Brakes. The Federal Machine and Welder Co., Warren, Ohio.

Ward Zephyr—Attic Fans. Edgar T. Ward Industries, Inc., Chicago, Ill.

Warmahl—Furnaces. Mahl Mfg. Co., Huntington Park, Calif.

Warmaster—Wall Furnaces, Heaters. Williams Radiator Company, Glendale, Calif.

Warrior — Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.

Wateo — Spray Nozzles. Water Cooling Corp., New York City.

Waterbase—Furnaces. Farris Furnace Co., Springfield, Ill.

Water-Boy — Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.

Waterbury — Oil Burners, Ducts and Fittings, Pipe, Pipe Fittings and Accessories, Furnaces, Blowers. Waterman - Waterbury Co., Minneapolis, Minn.

Waterfoil—Waterproofing. A. C. Horn Co., Long Island City, N. Y.

Water Hot — Water Heaters. Security Mfg. Co., Kansas City, Mo.

Waterloo Airfoil — Grilles, Louvres, Registers. Titus Manufacturing Corporation, Waterloo, Ia.

Water - RAY - trols — Oil-fired Water Heater. Ray Oil Burner Co., San Francisco, Calif.

Waterseal — Cement. Thompson & Co., Pittsburgh, Pa.

Waterspar — Enamels and Lacquers. Pittsburgh Plate Glass Co., Pittsburgh.

Watertender—Humidifier Valve. Skuttle Mfg. Co., Detroit, Mich.

Wearweld — Arc Welding Electrodes. Lincoln Electric Co., Cleveland, O.

Weathercote — Waterproofing Compounds. Glidden Co., Cleveland, O.

Weathermakers — Air Conditioning Units. Carrier Corp., Syracuse, N. Y.

Weather-Man—Weather Compensating Thermostats, Time Switches. Automatic Devices Co., Inc., Chicago, Ill.

Weatherwin — Windows. Chamberlin Company of America, Detroit, Mich.

Weatherwood — Insulation. United States Gypsum Co., Chicago, Ill.

Webco—Portable Brakes. Webb Machine & Tool Co., Pittsburgh, Penn.

Webster—Air Washers. W. J. Strandwitz & Co., Inc., Camden, N. J.

Wedgbelt—Belts and Pulleys. American Pulley Co., Philadelphia, Pa.

Weir — Air Conditioning Furnaces, Gravity Furnaces, Heaters, Stokers. Meyer Furnace Co., Peoria, Ill.

Weirsteel — Sheets. Weirton Steel Co., Weirton, W. Va.

Weircoloy—Copper Bearing Galvanized Sheets. Weirton Steel Co., Weirton, W. Va.

Weirite—Tin Plate. Weirton Steel Co., Weirton, W. Va.

Weir - Meyer Heat — Furnaces. Meyer Furnace Co., Peoria, Ill.

Weirzin — Electrolitic Zinc Coated Sheets. Weirton Steel Co., Weirton, W. Va.

Weisco — Skylight Lifts. H. Weiss & Co., New York, N. Y.

Weldmaster—Brazing Torches. Modern Engineering Co., St. Louis.

Weldon—Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Weld-o-trol — Spot Welders. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Wellsville Savage—Fire Brick. Chicago Fire Brick Co., Chicago, Ill.

Wesco—Blower Filters, Oil Burners, Chimney Caps. Northwest Foundry & Furnace Co., Inc., Portland, Ore.

Wesco — Furnaces. John Westwick & Son, Inc., Galena, Ill.

Wesco—Furnaces. General Wesco Stove Co., Springfield, Mo.

Wesco Duplex—Utility Room Furnaces. Northwest Foundry & Furnace Co., Portland, Ore.

Wesco Hiboy — Furnaces. Northwest Foundry & Furnace Co., Inc., Portland, Ore.

Western — Blowers, Furnaces. International Sales Co., San Francisco.

Western—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles.

Western Fan—Roof Fan Ventilators. Western Engineering & Mfg. Co., Los Angeles, Calif.

Western King—Furnaces. Independence Stove & Furnace Co., Independence, Mo.

Western Rotary—Ventilators. Western Engineering & Manufacturing Co., Los Angeles.

Westernaire—Booster-Fan and Roof Fan. Engineering & Manufacturing Co., Los Angeles.

Westernaire Exhausters — Ventilating Fans. Western Engineering & Mfg. Co., Los Angeles, Calif.

Westmoreland — Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Wetoil—Soldering Flux. Farrelloy Co., Inc., Philadelphia.

Wexecote—Building Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Whip Clamp—Clamping Device. Whipple Sheet Metal Works, Lansing, Mich.

Whiricone — Spray Nozzles. Water Cooling Equipment Corp., St. Louis, Mo.

Whitney-Jensen—Sheet Metal Working Machinery and Tools. Whitney Metal Tool Co., Rockford, Ill.

Wiechert—Furnaces, Heaters. St. Clair Foundry Corp., Centralia, Ill.

Wilson — Arc Welders. Air Reduction Sales Company, New York City.

Wilson — Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.

Wind Electric — Roof Ventilators. Hirschman - Pohle Co., Inc., LeRoy, N. Y.

Wind Motor—Roof Ventilators. Airecon Industries, Detroit, Mich.

Wind-O-Cool—Fans. G. J. Belter Electric Mfg. Co., St. Louis.

Wind-O-Vent — Fans. Diehl Manufacturing Company, Somerville, N. J.

Wind-O-Vent — Ventilator Units. Reed Unit-Fans, Inc., New Orleans, La.

Wingfoil—Fans, Ventilators. L. J. Wing Mfg. Co., New York City.

Winkler—Oil Burners, Heaters, Stokers. U. S. Machine Corporation, Lebanon, Ind.

Winter-Chaser — Furnaces, Heaters. Campbell Heating Co., Des Moines, Ia.

Winter King — Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Winthrop—Water Heaters. Luxra Co., Atchison, Kans.

Wisconsin — Motors. Electric Motor Corp., Racine, Wis.

Wisco—Perforated Metals, Wire, Wickwire Spencer Steel Div., Colorado Fuel & Iron Corp., New York, N. Y.

Wizard — Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.

Wolfe—Angle Meter, Circle Meter, Divisor, Protractor. Interstate Sales Co., New York City.

Wolverine—Fans, Exhausters, Ventilators. Belanger Fan & Blower Co., Detroit, Mich.

Wolverine — Furnaces. Marshall Furnace Co., Marshall, Mich.

WonderFlux—Flux. Sherman & Co., New York City.

Woods — Hack Saws. Howes - Woods Company, Cambridge, Mass.

Woolfelt — Duct Insulation. Norristown Magnesia & Asbestos Co., Norristown, Pa.

Workhorse—Motors. Crozier Machine Tool Co., Hawthorne, Calif.

Wormfeed — Stokers. Canton Stoker Corp., Canton, O.

Wrightway — Water Heaters. Wright Manufacturing Corp., Delaware, Ohio.

Wyandotte—Furnaces. American Radiator & Standard Sanitary Corporation, Pittsburgh.

Wyco — Flexible Shaft Machines. Wyzenbeek & Staff, Inc., Chicago.

Wycoflex—Grinder. Wyzenbeek & Staff, Inc., Chicago.

X

XL—Metal Windows. Herrmann & Grace Co., Brooklyn, N. Y.

X-L-All — Furnaces. Deshler Foundry & Machine Works, Deshler, Ohio.

Xcel-Flux — Electrodes. Universal Welder Corporation, Cleveland.

Xit—Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.

X - Pandoseal — Transparent Waterproofing. X-Pando Corp., Long Island City.

XX Punches—Parker-Kalon Corp., New York.

Y

Yager's—Flux. Alex R. Benson Co., Inc., Hudson, N. Y.

Yale—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles.

Yankee — Damper Clips and Tips. Howes - Woods Company, Cambridge, Mass.

YarWay—Nozzles. Yarnall-Waring Co., Philadelphia, Pa.

Yearround — Air Conditioning Units. Conditionaire Unit Co., Chicago, Ill.

Yemco—Buffers, Grinders, Oil Burners, Water Heaters. York Electric & Machine Co., York, Pa.

Yeloy—Plates. Youngstown Sheet & Tube Co., Youngstown, Ohio.

Yorkaire Conditioners — Air Conditioning Units. York Corp., York, Pa.

York-Heat — Oil Burners, Furnaces, Heaters. York-Shipley, Inc., York, Penn.

YouBert — Collectors and Blow Pipe Fittings. Young & Bertke Co., Cincinnati, O.

Z

"Z" Seal—Bearings. Shafer Bearing Co., Downers Grove, Ill.

Zeph-Air — Gas Furnace. XXth Century Heating & Ventilating Co., Akron, O.

Zephair — Ventilating System. Hunter Fan & Ventilating Co., Inc., Memphis, Tenn.

Zephyr—A. C. Stoker Furnace. Premier Furnace Co., Dowagiac, Mich.

Zephyr—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.

Zephyr—Portable Electric Drills. Portable Electric Tools, Inc., Chicago, Ill.

Zephyr—Saws. DoAll Company, Minneapolis.

Zero—Cement and Refractories. Standard Fuel Engineering Co., Detroit, Mich.

Zerozone—Compressors. Copeland Refrigeration Corporation, Sidney, Ohio.

Zilloy—Zinc Roofing. New Jersey Zinc Co., New York City.

Zinc-Alloy—Sheets. Inland Steel Co., Chicago, Ill.

Zinc Chromate Primer—Metal Protecting Paint. Hilo Varnish Corp., Brooklyn, N. Y.

Zinodine — Corrosion-preventive and paint bonding chemical. American Chemical Paint Co., Ambler, Pa.

Zonair—Furnaces. Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Zono—Combustion Chambers. Robinson Insulation Co., Great Falls, Mont.

Zonolite—Insulation. Robinson Insulation Co., Great Falls, Mont.

Section of

American Artisan

1950 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[Section 3—MANUFACTURERS' ADDRESSES]

A

• A & A Register Co., 8327 Clinton Rd., Cleveland 9, Ohio.
A. C. Company, 5140 Crenshaw Blvd., Los Angeles 43, Calif.
A-C-Devices Co., 4301 N. Harlem Ave., Chicago 33, Ill.
• A-J Manufacturing Co., 2119 Washington St., Kansas City 8, Mo.
A & J Company, 344 W. 59th St., Chicago 21.
Abbott Mfg. Co., 333 E. Main St., Painesville, Ohio.
• Accurate Sheet Metal & Mfg. Works, 2336-40 Milwaukee Av., Chicago 47.
Ace Engineering Co., 1435 W. 15th St., Chicago 8.
Acer & Whedon, Inc., Commercial St., Medina, N. Y.
Acet-A-Tips Co., 5069 W. Madison St., Chicago 44.
Ackermann Manufacturing Company, Wheeling, W. Va.
Acme Asbestos Covering & Flooring Co., 222 Elizabeth St., Chicago 7.
Acme Electric Heating Co., Inc., 1205 Washington St., Boston 18.
• Acme Electric Welder Co., 2618 Fruitland Rd., Los Angeles 11.
• Acme Equipment Co., Inc., 126 S. Clinton St., Chicago 6.
Acme Equipment Co., Muskogee, Okla.
Acme Furnace Fittings Co., 844 W. 59th St., Chicago 17, Ill.
Acme Heat & Power Inc., 318 Ten Eyck St., Brooklyn 6, N. Y.
Acme Industries, Inc., Mechanic & Gansson Sts., Jackson, Mich.
• Acme Manufacturing Co., 7930 State Rd., Philadelphia 36.
Acme Oil Burner Co., Inc., 210 Third Av. S. W., Cedar Rapids, Ia.
Acme Saw Works & Supply Co., 4213 Avalon Blvd., Los Angeles 3, Calif.
Acme Wire & Iron Works, Canfield & Moran, Detroit 7.
Acro Welder Mfg. Co., 1835 W. St. Paul Ave., Milwaukee 3, Wis.
Adams Bros. Mfg. Co., Inc., 1500 W. North Av., Pittsburgh 12.
• Adams Co., The, Bridge St., Dubuque, Ia.
Adams Manufacturing Co., 1364 E. 47th St., Cleveland 3.
Adams Mfg. Co., The, 1530 St. Clair Ave., Cleveland, Ohio.
Adelta Mfg. Co., 21st & Ellsworth Sts., Philadelphia 46, Penn.
Advance Aluminum Castings Corp., 2742 W. 38th Pl., Chicago 32.
Advance Furnace Company, 2300 E. Douglas, Wichita 7, Kansas.
Aeolus Dickinson, 3220, S. Artesian Av., Chicago 8.
• Aeroin Corp., 410 S. Geddes St., Syracuse 1, N. Y.
Aeroil Products Co., Inc., Wesley St., South Hackensack, N. J.
Aeroquip Corp., 300 S. East Ave., Jackson, Mich.
Aerotec Corp., Greenwich, Conn.
Aerovent Fan Co., Inc., 710 E. Ash St., Piqua, Ohio.
Aget-Detroit Co., 602 First National Bank Bldg., Ann Arbor, Mich.
Agnew Electric Co., 127 S. Main St., Milford, Mich.
Agricola Furnace Co., Inc., North 12th St., Gadsden, Ala.
• Ahlberg Bearing Co., 3912 W. 47th St., Chicago 32.
Air Conditioning Equip. Co., P. O. Box 1123, Minneapolis 1.
• Air Conditioning Products Company, 2340 W. Lafayette Blvd., Detroit, 16.
• Air Control Products, Inc., Coopersville, Mich.
• Air Controls, Inc., 2310 E. Superior Av., Cleveland 14.
Air Cooling Engineering Co., Morton Grove, Ill.
Air Devices, Inc., 17 E. 42nd St., New York City 17.
Air-Eau Heat, Inc., 1002 S.E. 53rd Ave., Portland 12, Ore.
Air Equipment Co., Inc., 1713 W. Carroll Ave., Chicago 12.
Aircon Industries, 2536 Fourteenth St., Detroit 16.
Air Filter Corp., 108 N. Water St., Milwaukee 2, Wis.
Airflame, Inc., 648 McAlister Av., Waukegan, Ill.
Airgard Manufacturing Co., 362 W. Erie St., Chicago 10.
Airjet Ventilator Co., 380 Plumosa Dr., Pasadena 10, Calif.
Airkem, Inc., 241 E. 44th St., New York 17, N. Y.
Airmaster Corp., 4317 Ravenswood Av., Chicago 13.
Air-Maze Corp., 5200 Harvard Av., Cleveland 5.
Air Products, Inc., 5th & Pine Sts., Pittsburg, Kans.
Air Reduction Sales Co., 60 E. 42nd St., New York City 17.
Air & Refrigeration Corp., 475 Fifth Av., New York City 17.
Air-Speed Tool Co., 1500 W. Slauson Av., Los Angeles 44.
Air Stream Filter Corp., 2100 Washington Av., St. Louis 3.
• Airtemp Div., Chrysler Corp., 119 Leo, St., Dayton 1, Ohio.
• Airtherm Mfg. Co., 706 S. Spring Ave., St. Louis 10, Mo.
Airwasher Corporation, Eaton Rapids, Mich.
Ajax Building Bracket Co., 1551 Rydal-Mount Rd., Cleveland Heights 18, O.
• Ajax Furnace Fitting Company Div., Cincinnati Sheet Metal & Roofing Co., 214 E. Front St., Cincinnati 2.
Ajax Thermostatic Controls Co., County Line Rd., Gates Mills, Ohio.
Akron Steel & Sales, Inc., Akron, Ohio.
Aladdin Heating Corp., 2222 San Pablo Av., Oakland 12, Calif.
Albertson & Co., Inc., Sioux City 3, Iowa.
Alco-Dorse Co., 4300 N. California Av., Chicago 18.
Alco Valve Co., 865 Kingsland Av., St. Louis 5.
Alcon Engineering Co., 902 19th St., San Diego 2, Calif.
Alden Manufacturing Co., W. Walnut St., Painesville, Ohio.
Aldrich Co., Wyoming, Ill.
Alfol Division, Reflectal Corporation, 155 E. 44th St., New York 17.
Allan Corp., 823 Prospect St., Trenton 8, N. J.
• Allan Engineering Co., Walter, Box 1211, Midway Rd., Dallas, Texas.
Allegheny Ludlum Steel Corp., 3030 Oliver Bldg., Pittsburgh 22, Pa.
Allen, H. D., 3201 Casitas Av., Los Angeles 26.
Allen Billmyre Div., Lamson Corporation, Syracuse 1, N. Y.
Allen-Bradley Co., 1335 S. First St., Milwaukee 4, Wis.
• Allen Co., Inc., L. B., 6719 Bryn Mawr Av., Chicago 31.
Allen Manufacturing Co., Inc., Nashville 1, Tenn.
Allen Stoker Co., 235 S. Penn St., Allentown, Pa.
Allen Ventilator Div., Production Planning Co., 704 Woodward, Rochester, Mich.
All-Gas Equipment Company, 2235 N. 31 st St., Milwaukee, Wis.
Allied Building Credits, Inc., Dept. A, 3100 Wilshire Blvd., Los Angeles 5.
Allied Heating & Air Conditioning Co., 14807 Condon Av., Lawndale, Calif.
Allis-Chalmers Manufacturing Company, P. O. Box 512, Milwaukee 1.
Allis Co., Louis, 427 Stewart St., Milwaukee 7.
Allmetal Weatherstrip Co., 2241 N. Knox Av., Chicago 39.
Alpha Metals, Inc., 363 Hudson Av., Brooklyn 1.
Alphil Spot Welding Co., 1058 Pacific St., Brooklyn.
• Alton Manufacturing Co., 1112 Ross Av., Dallas 3, Tex.
Alton Mineral Wool Insulation Co., 2317 Whittemore Pl., St. Louis 4, Mo.
Aluminum Co. of America, 801 Gulf Bldg., Pittsburgh 19.
Aluminum Goods Mfg. Co., Manitowoc, Wis.
Amerform Corporation, Real Estate Trust Building, Philadelphia 7.
American Agile Corporation, 5906 Hough Av., Cleveland 3.
American Air Filter Co., Inc., 355 Central Av., Louisville 8, Ky.
American Blower Corp., Detroit 32.
American Brass Co., 414 Meadow St., Waterbury 20, Conn.
American Cabinet Hardware Corp., Rockford, Ill.
American Chain Division, American Chain & Cable Co., Inc., York, Pa.
American Chemical Paint Co., Brookside Av., Ambler, Pa.
American Coal Burner Co., 18-20 E. Erie St., Chicago 11.
American Coils, Inc., 360 Thomas St., Newark 5, N. J.
American Control Company, Box 629, Compton, Calif.
American Coolair Corp., 3604 Mayflower St., P. O. Box 2209, Jacksonville 3, Fla.
American Cooling Tower Co., 2710 McGee St., Kansas City, Mo.
American District Steam Co., P. O. Box 848, North Tonawanda, N. Y.
American Engineering Co., 2446 Aramingo Av., Philadelphia 25.
American Flange & Manufacturing Co., Inc., 50 Rockefeller Plaza, New York 20.
American Fluresit Co., 4831 Red Bank Rd., Cincinnati 27, Ohio.
American Foundry & Furnace Co., Washington at McClun St., Bloomington, Ill.
• American Furnace Co., 2719-31 Delmar Blvd., St. Louis 3.
American Furnace & Foundry Co., Box 198, Milan, Mich.
American Gas Burner, Inc., 418 S. Pennsylvania St., Indianapolis 4, Ind.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

American Gas Heater Corporation, 1650 W. 19th St., Chicago 20, Ill.
• American Gas Machine Co., 505 Front St., Albert Lea, Minn.
American Hair & Felt Co., 222 N. Bank Dr., Chicago 54.
American Instrument Co., 8010 Georgia Av., Silver Spring, Md.
American Insulator Corporation, New Freedom, Pa.
American-Larson Ventilating Co., 1004 Keystone Bldg., Pittsburgh 22, Pa.
• American Machine Products Co., 491 S. Third Av., Marshalltown, Ia.
American-Marietta Company, 43 E. Ohio St., Chicago 11.
American Metal Hose Branch, American Brass Co., 498 S. Main St., Waterbury 20, Conn.
American Metal Products Co., Box 7037, Sylvania Sta., Fort Worth 9, Texas.
American Mohawk Co., Inc., 580 Hudson St., New York 14.
American MoneRail Co., 13132 Athens Ave., Cleveland 7, Ohio.
American Nickeloid Co., 1506 Second St., Peru, Ill.
American Products Corporation, 422 S. Dearborn St., Chicago 5.
American Pulley Co., 4200 Wissahickon Av., Philadelphia 29.
• American Radiator & Standard Sanitary Corp., P. O. Box 1336, Pittsburgh 30.
American Screw Co., 21 Stevens St., Providence 1, R. I.
American Smelting & Refining Co., 120 Broadway, New York City 5, N. Y.
American Solder & Flux Co., 2152 East Norris St., Philadelphia 25.
American Steel Band Co., Box 545, Pittsburgh 30.
American Steel & Wire Co., (U. S. Steel Corp. Subsidiary) 614 Superior Av., N. W., Cleveland 13.
American Stove Co., Lorain Div., 1200 Long Av., Lorain, O.
American Ventilating Hose Co., 15 Park Row, New York 7, N. Y.
American Warming & Ventilating Co., 1017 Summit St., Toledo 4.
American Zinc Institute, 35 E. Wacker Dr., Chicago, Ill.
Ames Co., W. R., 150 Hooper St., San Francisco 7.
Ammerman Co., C. L., Metropolitan Life Bldg., Minneapolis 1, Minn.
Ampion Corporation, 4-88 Forty-Seventh Av., Long Island City 1, N. Y.
Anchor Burner Co., P. O. Box 4, 420 E. Grand Av., Oklahoma City, Okla.
Anchor Division, Stratton & Terstegge Co., P. O. Box 311, New Albany, Ind.
Anderson Oil Heating Co., 1300 E. Pike St., Seattle 22, Wash.
Andrews Heater Co., 1750 W. Jefferson Blvd., Los Angeles 7.
Andrews Heating Co., 117-199 Main St., S. E., Minneapolis 14.
• Anemostat Corp. of America, 10 E. 39th St., New York City 16.
Angier Corp., Framingham, Mass.
Andrews-Schroeder Heating Co., Inc., 120 W. Chevy Chase, Glendale 4, Calif.
Anthracite Institute, 101 Park Ave., New York 17, N. Y.
Anti-Friction Bearings Company, 2020 S. Figueroa St., Los Angeles 7.
Any Wall Anchor Co., 1606 Locust St., St. Louis, Mo.
Apollo Metal Works, 66th Pl. & S. Oak Park Av., Clearing Sta., Chicago 38.
Apollo Steel Co., 609-617 Warren Av., Apollo, Pa.
Appleton Supply Co., Inc., P. O. Box 319, Appleton, Wis.
Applied Mechanics Co., 167 Oliver St., Boston 10.
April Showers Co., Inc., 4126 Eighth St., N. W., Washington 11, D. C.
Aqua-Mist Co., 426 Jefferson St., Topeka, Kan.
Arabol Manufacturing Co., 110 E. 42nd St., New York 17, N. Y.
Arcos Corp., 1500 S. 50th St., Philadelphia 43, Penn.
Arcweld Mfg. Co., Inc., 3469 Third Av., W., Seattle 99, Wash.
Arex Co., 333 N. Michigan Av., Chicago 1.
Arlington Electric Co., 5530 Easton Av., St. Louis 12.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
• Armstrong Co., 941 S. Post St., Detroit 17.
Armstrong Cork Co., Lancaster, Penn.
• Armstrong Furnace Co., 851 W. Third Ave., Columbus 8, Ohio.
Armstrong Products Corporation, Box 940, Huntington 12, W. Va.
Arrow-Hart & Hegeman Elect. Co., 103 Hawthorne St., Hartford 6, Conn.
Aston Products, Inc., 19354 John R, Detroit 3.
Associated Heating Supplies, Inc., 2637 S. LaSalle St., Chicago 16, Ill.
Associates Engineering Co., 110 Elmwood Ave., Buffalo 1, N. Y.
Atcheson Glass Co., T. J., 920 Main St., Buffalo 3, N. Y.
Atchison Specialty Mfg. Co., 1430 Pacific Av., Atchison, Kan.
Atkins and Co., E. C., 402 S. Illinois St., Indianapolis 9, Ind.
Atlas Heating & Ventilating Co., 567 Fourth St., San Francisco 7.
• Atlas Mfg. Co., Eustis and Robbins, St. Paul, Minn.
Atlas Powder Co., North Chicago, Ill.
Atlas Utilities Co., Inc., 17 Exchange St., Providence 3, R. I.
Atlas Valve Co., 283 South St., Newark 5, N. J.
Auburn Burner Co., Lock Box 269, Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Lock Box 471, Auburn, Ind.
• Auer Register Co., 3608 Payne Av., Cleveland 14.
Au-Temp-Co Corp., 521 Fifth Av., New York City 17.
Autoforce Ventilating System, 244 Washington St., Boston 8.
Autogas Co., 2158 Fullerton Ave., Chicago 47.
• Auto-Heat, Newfield St., Middletown, Conn.
• Automatic Burner Corp., 1823 Carroll Av., Chicago 12, Ill.
Automatic Devices Co., Inc., Weather Controls Div., 53 W. Jackson Blvd., Chicago 4.
Automatic Electric Mfg. Co., 10 State St., Mankato, Minn.
• Automatic Firing Corporation, 6504 Olive Blvd., St. Louis 5.
Automatic Furnace Co., 1111 Race St., Lansing 5, Mich.
Automatic Gas Equipment Co., 801 Brushton Av., Pittsburgh, 21.
• Automatic Humidifier Co., 19th & Main Sts., Cedar Falls, Ia.
• Automatic Products Co., 8450 N. 38nd St., Milwaukee 10, Wis.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
Automatic Temperature Control Co., Inc., 5213 Pulaski Av., Philadelphia 44.
Avery Farm Machinery Co., 2006 S. Washington St., Peoria 2, Ill.

B

B & C Metal Stamping Co., 590-592 Means St., N.W., Atlanta 3, Ga.
B and K Plastic Co., Inc., 556 Summer St., Paterson 3, N. J.
B. G. B. Manufacturing Co., 5021 Wyoming, Dearborn, Mich.
B/W Controller Corp., 2200 E. Maple Av., Birmingham, Mich.
Babbin, Inc., 358 Canal St., New York City 13.
Babbitt Chemical Specialties Co., 630 Fifth Ave., New York 20.
Babcock & Wilcox Co., 85 Liberty St., New York City 6.
• Bacharach Industrial Instrument Co., 7000 Bennett St., Pittsburgh 3, Pa.
Bache & Co., Semon, Greenwich & Morton Sts., New York 14.
Baer Brothers, 438 W. 37th St., New York City 18.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, O.
Baker Furnace & Cleaner Mfg. Co., 2810 Midwood Av., Toledo 6, Ohio.
Baker Ice Machine Co., Inc., South Windham, Maine.
Baldor Electric Co., 4358 Duncan Av., St. Louis 10, Mo.
Baldwin-Hill Co., 597 Breunig Ave., Trenton 2, N. J.
Balloffet Dies & Nozzle Co., Inc., 6825 Adams St., Guttenberg, N. J.
Ballanoff Metal Products Co., 1830 E. 37th St., Cleveland 14.
Baltimore Porcelain Steel Corp., P. O. Box 928, Baltimore 3, Md.
Banner Burner Co., Indianola Ave., Youngstown 7, Ohio.
Banner Products Company, 4934 N. 29th St., Milwaukee 9, Wis.
Banner Repair Parts Co., 103 E. Indianola Av., Youngstown 7, O.
• Barber-Colman Co., 1226 Rock St., Rockford, Ill.
• Barber Gas Burner Co., 3704 Superior Av., Cleveland 14.
Bar-Brook Mfg. Co., Inc., 6135 Linwood Av., Shreveport, La.
Barcafer Mfg. Co., Salina, Kansas.
Bard Mfg. Co., Evansport Road, Bryan, O.
Barnard Co., Geo. A., 74 Prescott St., Worcester, Mass.
Barnes Metal Products Co., 4425 W. 16th St., Chicago 23.
Barnes Co., Inc., W. O., 1297 Terminal Av., Detroit 14.
Barnhardt Manufacturing Co., P. O. Box 2176, Charlotte 1, N. C.
Barrett Division, Allied Chemical & Dye Corp., 40 Rector St., New York City 6.
• Barth Manufacturing Co., Millidale, Conn.
Bartlett Mfg. Co., 3003 E. Grand Blvd., Detroit 2.
Barton Co., 118 S. Eighth St., Minneapolis 2, Minn.
Barwick Mfg. Corp., 317 E. 18th, Wichita 5, Kans.
Bastian-Blessing Co., 4201 W. Petersen Av., Chicago 30.
Bastian Manufacturing Co., W. B., 2117 Violet St., Los Angeles 21.
Bastian-Morley Co., Inc., 208 Truesdale Ave., La Porte, Ind.
Bath Co., Cyril, E., 70th & Machinery Av., Cleveland 3, Ohio.
• Bauer & Black Div., The Kendall Co., 2500 S. Dearborn St., Chicago 16.
• Bayley Blower Co., 1817 S. 66th St., Milwaukee 14.
Bayonne Steel Products Co., Clinton & Jelliff Aves., Newark 8, N. J.
Beacon-Morris Corp., 60 Brainerd Rd., Allston, Boston 34.
Bead Chain Mfg. Co., 105 Mountain Grove St., Bridgeport 5, Conn.
Beall Pipe & Tank Corporation, 1945 N. Columbia Dr., Portland 3, Ore.
Bearlee Products Co., 1255 S. Monroe Ave., Green Bay, Wis.
Bear Mfg. Co., Industrial Div., 2030 Fifth Av., Rock Island, Ill.
Beatty Machine & Mfg. Co., 932 150th St., Hammond, Ind.
Beaver Mfg. Co., 2801 S. E., Milwaukee, Portland, Ore.
Beck Engineering Combustion Kompany, 2100 Cole St., St. Louis 6.
Beckett & Co., Thomas, 2001 Willowbrook Rd., P. O. 7354, Dallas 9, Texas.
Beckett Corporation, R. W., W. River St., Elyria, Ohio.
Beckley Perforating Co., 305 North Av., Garwood, N. J.
Belanger Fan & Blower Co., 2340 W. Lafayette Blvd., Detroit 16.
Belden Machine Co., 1108 Whalley Av., New Haven 15, Conn.
Bell & Gossett Co., 8200 N. Austin Av., Morton Grove, Ill.
Belmont Smelting & Refining Works, Inc., 320 Belmont Av., Brooklyn 7.
Belter Electric Mfg. Co., G. J., 2830 Olive St., St. Louis 8.
Benjamin Air Rifle Co., 1627 S. 8th St., St. Louis 4.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Benjamin Elec. Mfg. Co., Des Plaines, Ill.
Benson Co., Inc., Alex R., 1040 S. Bay Rd., Hudson, N. Y.
• Berger Bros Co., 229-237 Arch St., Philadelphia 6.
Berger Furnace Mfg. Co., 5924 Center Ave., Pittsburgh 6, Penn.
Berger Mfg. Div. of Republic Steel Corp., 1038 Bleden Ave., N. E., Canton 5, O.
Bergman Tool Mfg. Co., Inc., 1373-75 Niagara St., Buffalo 13, N. Y.
Bergstrom Mfg. Corp., Neenah, Wis.
Berkroy Products, Inc., 2516 N. Ontario St., Burbank, Calif.
Bern's Mfg. Co., 2278 Elston Av., Chicago 14.
Berns Co., Otto, 280 Lyell Ave., Rochester 6, N. Y.
Berridge Shear Company, Jefferson & St. Joseph Sts., Sturgis, Mich.
Bertsch & Co., Church St., Cambridge City, Ind.
Besco Mfg. Co., P. O. Box 1163, Cincinnati 1, Ohio.
Best Register Co., 2005 W. Oklahoma Av., Milwaukee 7.
Bethlehem Foundry & Machine Co., 325 W. Second St., Bethlehem, Pa.
• Bethlehem Steel Co., 701 E. Third St., Bethlehem, Pa.
Betz Corp., 445 State St., Hammond, Ind.
• Beverly Shear Mfg. Co., The, 2004 W. 111th St., Chicago 43, Ill.
Beyer Oil Burner Co., Rosamond, Calif.
Bieler & Son, L., 35-42 41st St., Long Island City, N. Y.
Biersach & Niedermeyer Co., 1937 N. Hubbard St., Milwaukee 12.
Biggs Supply Co., B. C., Lincoln, Nebr.
Binks Mfg. Co., 3114 Carroll Av., Chicago 12.
Bird Archer Co., 4237 N. America St., Philadelphia
Bird and Son, Inc., East Walpole, Mass.
• Bishop & Babcock Mfg. Co., 4901 Hamilton Av., Cleveland 14.
Bishop Co., R. H., 102 N. Second St., Champaign, Ill.
Black & Decker Mfg. Co., 652 Pennsylvania Ave., Towson 4, Md.
Black Diamond Stoker Co., E. 4th & Plymouth, Sioux City, Ia.
Black Manufacturing Co., 1434 W. Baltimore St., Baltimore 23, Md.
Black, Sivalls & Bryson, Inc., 106 W. 14th St., Kansas City 6, Mo.
Bliss Co., E. W., 1420 Hastings St., Toledo 7, Ohio.
Blower Application Co., 2165 N. 30th St., Milwaukee 10, Wis.
Blue Ridge Talc Co., Inc., Henry, Va.
Bock Corporation, 110 S. Dickinson St., Madison 3, Wis.
Bodine Electric Co., 2254 W. Ohio St., Chicago 12.
Bogue Electric Co., 27 Kentucky Av., Paterson 3, N. J.
Bohn Aluminum & Brass, Michigan Ave. & Shelby St., Detroit.
Bomas Mfg. Co., 209 State St., Binghamton, N. Y.
Bone Tool & Gauge Co., 280 24th St., Detroit 16.
Borm Manufacturing Co., 23 North Union Sts., Elgin, Ill.
Bossert Co., Div., The Timken-Detroit Axle Co., 1002 Oswego St., Utica 1, N. Y.
Boston Machine Works Company, 7 Willow St., Lynn, Mass.
Botfield Refractories Co., Swanson & Clymer Sts., Philadelphia 47.
Bovee Furnace Works, 180 W. Eighth St., Waterloo, Ia.
Bowlby Air Devices Co., 300 W. Indianapolis, Wichita, Kansas.
Bowser, Inc., Incineration Div., Cairo, Ill.
Braden Mfg. Co., 431 N. 14th St., Terre Haute, Ind.
• Brandes Co., 2046 Winnebago St., Madison 4, Wis.
Brasco Mfg. Co., 152nd & Commercial Av., Harvey, Ill.
• Brauer Supply Co., A. G., 2100 Washington Ave., St. Louis 3.
Breese Burners, Inc., P. O. Box 1458, Santa Fe, N. M.
Breeze Corporations, Inc., 42 So. 6th St., Newark 7, N. J.
Breidert, G. C., Co., 3129 San Fernando Rd., Los Angeles 65, Calif.
Bremil Mfg. Co., Box 1030, Erie, Pa.
• Brenner & Co., Inc., Jacob 45 Third St., Fond du Lac, Wis.
Breuer Electric Mfg. Co., 5100 N. Ravenswood Ave., Chicago 40.
Bridgeport Brass Co., 30 Grand St., Bridgeport 2, Conn.
Bridgeport Chain & Mfg. Co., 964 Crescent Ave., Bridgeport 1, Conn.
Bristol Company, The, P.O. Box 1790, Waterbury 20, Conn.
Broan Mfg. Co., Inc., 1469 N. Water St., Milwaukee 2, Wis.
Brooks Co., Inc., B. D., 361 Atlantic Ave., Boston 10.
Bros Boiler & Mfg. Co., Wm., 1057 Tenth Ave., S. E., Minneapolis 14.
• Brown-Appton Co., 681 Fifth Ave., New York, N. Y.
Brown-Brockmeyer Co., Inc., 1098 Smithville Rd., Dayton 1, O.
Brown-Hart Engineering Corp., 1200 E. Nine Mile Rd., Hazel Park, Mich.
Brown Instrument Co., Div. Minneapolis-Honeywell Regulator Co., 4442 Wayne Ave., Philadelphia 44.
Brown Steel Tank Co., 2901 S. E. Fourth St., Minneapolis 14.
Brownell Co., 404 N. Findlay St., Dayton 1, O.
Browning Mfg. Co., Inc., Central Ave., Main & Chester Sts., Maysville, Ky.
Brumme Mfg. Co., 1320 E. Empire St., Bloomington, Ill.
• Brundage Co., 500 N. Park St., Kalamazoo 11, Mich.
Brunner Mfg. Co., 1821 Broad St., Utica 1, N. Y.
Bruno Tools, 9820 Santa Monica Blvd., Beverly Hills, Calif.
Brushes & Brooms Co., 75 Warren St., New York, N. Y.
Bryan Steam Corp., P. O. Box 337, Peru, Ind.
Bryant Corporation, C. L., 4610 St. Clair Av., Cleveland 3.
Bryant Heater Div., 17825 St. Clair Ave., Cleveland 10.
Buckeye Tools Corporation, 39 W. Apple St., Dayton 1, Ohio.
Buckeye Water Heater Co., 6901 Quincy Ave., Cleveland 4.
Budco Inc., 13415 Gratiot Av., Detroit 5.
• Buffalo Forge Co., 497 Broadway, Buffalo, N. Y.
Bundy Tubing Co., 8109 E. Jefferson Ave., Detroit 14, Mich.
Burcott Mills, 618 W. Fulton St., Chicago.
Burden Div., Torrington Mfg. Co., 1000 N. Orange Dr., Los Angeles 38.
Burdett Mfg. Co., 19 N. Sheldon St., Chicago.
Burgess-Norton Mfg. Co., 772 Peyton St., Geneva, Ill.
Burke Electric Co., 1201 W. 12th St., Erie, Pa.
Burner Devices, 324 N. Second Av., Arcadia, Calif.
Burnham Corp., Boiler Div., 2 Main St., Irvington-on-the-Hudson, N. Y.
Burnley Battery & Mfg. Co., Clay St., North East, Pa.
Burns Machinery Co., F. W., 1730 W. North Av., Milwaukee 5.
Burt Mfg. Co., 28 E. South St., Akron 11, O.
Bush Mfg. Co., 179 South St., West Hartford 10, Conn.
Byers Co., A. M., Clark Bldg., Pittsburgh 22.

C

C. & H. Air Conditioning Fan Co., Inc., 1603 DeKalb Ave., N. E., Atlanta 6, Ga.
Cabot, Inc., Samuel, 141 Milk St., Boston 9.
Cady Company, Sub. General Fittings Co., 123 Georgia Av., Providence 5, R. I.
Calbar Paint & Varnish Co., 2612 N. Martha St., Philadelphia, 25, Penn.
Calcinator Div., Valley Welding & Boiler Co., Bay City, Mich.
• Calculator Specialty Co., 122 S. Michigan Ave., Chicago 3, Ill.
Calesco Corporation, 58 Buffum, Lynn, Mass.
Calimode, Inc., 12 Third St., N.E., Atlanta, Ga.
Callahan Can Machine Co., Inc., 80 Richards St., Brooklyn.
Caloreil Burner Corp., 1477 Park St., Hartford 6, Conn.
Camloc Fastener Corp., 420 Lexington Ave., New York 17.
Campbell Engineering Co., 918 N. Union St., Appleton, Wis.
Campbell Equipment Co., 6443 Ridge Ave., Chicago 26, Ill.
Campbell Htg. Co., E. K., 1809 Manchester Ave., Kansas City 3, Mo.
Campbell Heating Co., P. O. Box 833, Des Moines 4, Iowa
Campbell Machine Div., American Chain & Cable Co., Inc., 929 Connecticut Ave., Bridgeport 2, Conn.
Campbell Stainless Products Co., Washington, Penn.
Cam-StaT Incorporated, Div. Paul Henry Company, 3310 S. La Cienega Blvd., Los Angeles 34.
Canatsey Electric Mfg. Co., P. O. Box 556, Kansas City 8, Mo.
Cannelton Sewer Pipe Co., Radiantile Div., Fourth & Washington Sts., Cannelton, Ind.
Canton Stoker Corp., 507 Andrews Pl., S. W., Canton 1, O.
Carajon Chemical Company, Inc., 428 W. Main St., Fremont, Mich.
Carbide & Carbon Chemicals Corp., 30 E. 42nd St., New York City 17.
Carboloy Company, Inc., 11177 E. Eight Mile Rd., Detroit 32.
Carey Manufacturing Company, Philip, Lockland, Cincinnati 15, Ohio.
Cargocaire Engineering Corp., 75 West St., New York, N. Y.
• Carnegie-Illinois Steel Corp., (U. S. Steel Corp. Subsidiary) Carnegie Bldg., Pittsburgh 30, Penn.
Carolina Aniline & Extract Co., Inc., P. O. 2356, Charlotte, N. C.
Carpenter Heating & Stoker Co., 3135 St. Clair Ave., Cleveland 14, Ohio.
Carrier Corp., 302 S. Geddes St., Syracuse 1, N. Y.
Carter Paint Co., 310 N. Main St., Liberty, Ind.
Cartier & Sons Co., M. N., 275 Canal St., Providence 3, R. I.
Cary Mfg. Co., Waupaca, Wis.
Castle Industries Co., Inc., Old Nepperhan Av., Yonkers 3, N. Y.
Catskill Metal Works, Inc., Catskill, N. Y.
Celco Corporation, 110 E. 42nd St., New York City 17.
Celotex Corp., 120 S. LaSalle St., Chicago 3.
Central Furnace & Stove Repair Co., 3037 Olive St., St. Louis 3.
Central Rubber & Steel Corporation, Findlay, Ohio.
Central States Mfg. Co., Inc., 1200 S. Summit, Arkansas City, Kans.
Central Steel & Wire Co., P. O. Box 5310-A, Chicago 80, Ill.
• Central-West Machinery Co., 335 S. Western Av., Chicago 12.
Centri-Spray Co., 14200 Meyers Rd., Detroit 27.
Century Electric Co., 1806 Pine St., St. Louis 3.
• Century Engineering Corp., 401-431 Third St., S. E., Cedar Rapids, Ia.
Century Fan & Vent. Co., 43 Cedar St., Stamford, Conn.
Ceramic Products Mfg. Co., 139 E. Garfield Av., Milwaukee 12.
Certain-teed Products Corp., 120 Lancaster Ave., Ardmore, Pa.
• Certified Furnace Company, Div. Stainless & Steel Products Co., 1000 Berry Av., St. Paul 4, Minn.
Chain Belt Co., 1618 W. Bruce St., Milwaukee 4.
Chalmers Oil Burner Co., 318 First Av., N., Minneapolis.
Chamberlin Company of America, 1354 Labrosse, Detroit 26.
Champion Blower & Forge Co., Harrisburg Av. & Charlotte St., Lancaster, Pa.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Champion Bronze Powder & Paint Co., 3521 W. Van Buren St., Chicago, Ill.
Champion Furnace Pipe Co., 211-215 Eaton St., Peoria 3, Ill.
Champion Products Co., 1197 Terrace St., Muskegon, Mich.
• Champion Tool Co., 4261 S. Broadway, Los Angeles 37, Calif.
Chandler Co., 804 1st Av., N. W., Cedar Rapids, Ia.
• Char-Gale Mfg. Co., 4325 Hiawatha Av., Minneapolis 4.
Chase Brass & Copper Co., Incorporated, 236 Grand St., Waterbury 20, Conn.
Chattanooga Implement & Mfg. Co., First and Delmar Sts., Chattanooga 6, Tenn.
Cheesman-Elliot Co., Inc., 639 Kent Av., Brooklyn 11.
Chelsea Fan & Blower Co., Inc., 1200 S. Grove St., Irvington 11., N. J.
Cheney Industries, 633 Prospect St., Trenton 5, N. J.
Cherry Rivet Co., 231 Winston St., Los Angeles 12.
Chevrolet Motor Division, General Motors Corporation, Detroit 2, Mich.
Chicago Automatic Stoker Co., Inc., 14 N. Clinton St., Chicago 6.
Chicago Belting Co., 113 N. Green St., Chicago 7.
Chicago Blower Corporation, 4558 W. Congress St., Chicago 24.
Chicago Die Casting Co., 2510-14 W. Monroe St., Chicago 12.
Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22.
Chicago Fan & Fin Coil Company, 1937 Walnut St., Chicago 12.
Chicago Filter Co., P. O. Box 807, Joliet, Ill.
Chicago Fire Brick Co., 1467 N. Elston Av., Chicago 22.
Chicago Furnace Supply Co., 1278 Clybourn Av., Chicago 10.
Chicago Heights Furnace Supply Co., 102 E. 22nd St., Chicago Heights, Ill.
Chicago Metal Hose Corp., 1515 S. Third Av., Maywood, Ill.
• Chicago Metal Mfg. Co., 2724 S. Rockwell St., Chicago 23.
Chicago Perforating Co., 2445 W. 24th Pl., Chicago 8.
Chicago Pneumatic Tool Co., 6 E. 44th St., New York 17.
Chicago Precision Machine Co., 920 So. Michigan Av., Chicago 5.
Chicago Rawhide Mfg. Co., 1312 Elston Av., Chicago.
Chicago Rivet & Mach. Co., 9600 W. Jackson Blvd., Bellwood, Ill.
Chicago Steel Furnace Co., 9326 S. Anthony Ave., Chicago 17.
Chicago Tramrail Co., 4000 W. Washington Blvd., Chicago 24, Ill.
Chimney-Furnace Corp., 400 Biltmore Ave., Rockville, Md.
Chisholm-Moore Hoist Corp., Div. Columbus McKinnon Chain Corp., Fremont Av., Tonawanda, N. Y.
• Cincinnati Bilbow Co., 2726 Colerain Ave., Cincinnati 14.
Cincinnati Shaper Co., Hopple, Garrard & Elam, Cincinnati 15.
Cincinnati Stamping & Furnace Co., 38 W. McMicken Ave., Cincinnati 10, Ohio.
Circo Tool Company, 902 W. Vliet St., Milwaukee 5, Wis.
Circulators & Devices Mfg. Corp., 22 Rose St., New York 7.
• Clarage Fan Co., North & Porter Sts., Kalamazoo 16, Mich.
Clark Bros. Belt Co., Millidale, Conn.
Clark Co., Henry N., 56-62 Union St., Boston 8.
Clark Controller Co., 1146 E. 152 St., Cleveland 10.
Clark Jr., Electric Co., Jas., 600 E. Bergman St., Louisville 8, Ky.
Clark Manufacturing Co., H. J., 3rd & Oak Sts., Duarte, Calif.
Clark Stek-O Corp., 1621 Dewey Av., Rochester 13, N. Y.
Clay Equipment Corp., Cedar Falls, Ia.
• Clayton & Lambert Mfg. Co., Louisville Div., 1707 Dixie Hwy., Louisville 10, Ky., and Middletown, O.
• Clean Sweep Co., P. O. Box 156, So. Lansing 9, Mich.
Clearing Machine Corp., 6499 W. 65th St., Chicago 38.
Cleaver-Brooks Company, Hev-E-Oil Burner Div., 336 E. Keefe Ave., Milwaukee 12, Wis.
Clemson Bros., Inc., Middletown, N. Y.
Cleveland Heater Co., 2310 Superior Av., N. E., Cleveland 14.
• Cleveland Humidifier Co., 7802 Wade Park Av., Cleveland 3.
Cleveland Punch & Shear Works Co., E. 40th & St. Clair Av., Cleveland 14.
Cleveland Tramrail Div., Cleveland Crane & Eng. Co., 5866 E. 283rd St., Wickliffe, Ohio.
• Climatemaker Slide Rule Service Co., 1404 E. Washington St., Bloomington, Ill.
Climax Machinery Company, 301 S. LaSalle St., Indianapolis 6, Ind.
Clinton Metallic Paint Co., P. O. Box 278, Clinton, N. Y.
Coal-O-Matic Co., Trucksville, Pa.
Coast Insulating Corporation, 634 S. Western Av., Los Angeles 5.
Coast Pneumatic Tool Co., 6516 Selma Av., Los Angeles 28.
Cole Hot Blast Mfg. Co., 2817 S. Racine Av., Chicago 9.
Coleman Co., Inc., St. Francis & Second St., Wichita 1, Kans.
• Cole-Sewell Engineering Company, 2288 University Av., St. Paul 4.
Colson Equipment & Supply Co., 1317 Willow St., Los Angeles 12.
Columbia Burner Co., 739 Ewing St., Toledo 7, O.
Columbia Specialty Company, Inc., 803 Bradley Blvd., Chevy Chase 15, Md.
Columbia Steel Co., (Sub. United States Steel Corp.), Russ Bldg., 235 Montgomery St., San Francisco 4.
Columbus Heating & Ventilating Co., 152 N. Yale Av., Columbus 16, Ohio.
Combustion Control Corp., 77 Broadway, Cambridge 42, Mass.
Combustion Engineering-Superheater, Inc., 200 Madison Ave., New York 16, N. Y.
Combustion Engineering Co., Inc., 1032 W. Main St., Chattanooga 2, Tenn.
• Comfort Products Corp., 2220 S. Lamesa St., Dallas 2, Texas.
Commercialaire, Inc., 300 Pacific St., Brooklyn 2, N. Y.
Commercial Filters Corporation, 18 W. Third St., Boston 27.
Commercial Shearing & Stamping Co., P. O. Box 712, Youngstown 1, Ohio.
Commonwealth Brass Corp., 5751-5825 Commonwealth Av., Detroit 8.
Commonwealth Company, 3127 W. Commonwealth Av., Alhambra, Calif.
Compton Shear Co., W. H., 314 Camden St., Newark 2, N. J.
• Conco Engineering Wks., Heating Division, Mendota, Ill.
• Condensation Engineering Corp., 123 S. Michigan Av., Chicago 3.
Conditionaire Unit Co., 3321 Montrose Ave., Chicago 18.
Congress Drives, Div. Tann Corporation, 3750 E. Outer Dr., Detroit 13.
Conklin Brass & Copper Co., Inc., T. E., 54-60 Lafayette St., New York 13.
Connery Construction Co., Second & Luzerne Sts., Philadelphia 40, Penn.
• Connor Eng. Corp., W. B., 114 E. 32nd St., New York 16.
Connors Paint Mfg. Co., Wm., 669-683 River St., Troy, N. Y.
Consolidated Industries, Inc., Lafayette, Ind.
Continental Air-Filters, Inc., P. O. Box 1647, Louisville 1, Ky.
Continental Instrument Co., 1364 E. 47th St., Cleveland 3.
Continental Products Co., 1150 E. 222nd St., Euclid 17, O.
Continental Screw Co., Mt. Pleasant St., New Bedford, Mass.
• Continental Steel Corp., 1108 S. Main St., Kokomo, Ind.
Continental Water Heater Co., 1301 Pasadena Av., Los Angeles 31.
Controlair Manufacturing Company, 1932 S. Compton St., Los Angeles 11, Calif.
Cooper Co., Clark, Palmyra, N. J.
Cooper & Cooper, Inc., 37 Fenn St., Pittsfield, Mass.
Cooper Oven Thermometer Co., Pequabuck, Conn.
Copeland Refrigeration Corp., Sidney, O.
Copperweld Steel Co., Box 1000, Glassport, Pa.
Coppus Engineering Corp., 344 Park Ave., Worcester 8, Mass.
Corbin Div., P & F, American Hardware Corp., 67 Park St., New Britain, Conn.
Corbman Bros., Inc., 315 N. 7th St., Philadelphia 6.
Cordo Chemical Corp., 34 Smith St., Norwalk, Conn.
Cork Import Corp., 39 Park Place, Englewood, N. J.
Cork Insulation Co., Inc., 155 E. 44th St., New York City.
• Corlett-Turner Co., 1001 S. Kostner Ave., Chicago 24, Ill.
Corcoaire Heater Corp., 1422 Euclid Ave., Cleveland 15.
• Cotta Transmission Co., 2340 Eleventh St., Rockford, Ill.
Coughlan Co., G. N., West Orange, N. J.
Cox-Nef Corp., Bay Street, St. Johnsbury, Vt.
Cramer Co., Inc., The R. W., Centerbrook, Conn.
Cramer Manufacturing Co., 5110 Westfield Ave., N. W., Canton, Ohio.
Crandall Mfg. Co., 1512 W. Slauson, Los Angeles 44.
Crane Co., 836 S. Michigan Av., Chicago 5, Ill.
Crary Mfg. Co., 396 N. Second St., Middleport, O.
• Crescent Tool Co., 239 Harrison St., Jamestown, N. Y.
Crise Mfg. Co., 2040 E Main St., Columbus 16, Ohio.
Crocker-Wheeler Electric Mfg. Co., Ampere 1, N. J.
Cromley's, Lewisburg, Penn.
Cronk Company, 2800 Gaston Av., Dallas 1, Texas.
Cross Engineering Co., 160-178 Dundaff St., Carbondale, Pa.
Crown Controls Company, Inc., New Bremen, Ohio.
Crown Heater Company, Box 629, Compton, Calif.
Crown Iron Works Co., 1329 Tyler St., N. E., Minneapolis 13.
Crosier Machine Tool Co., 634 N. Prairie Ave., Hawthorne 1, Calif.
Crucible Steel Co. of America, 405 Lexington Av., New York 17.
Cuno Engineering Corporation, 30 S. Vine St., Meriden, Conn.
Cuprometal Manufacturing Corp., 44th Ave. & Junction Blvd., Corona, N. Y.
Curley Electric Mfg. Co., 6104 W. Washington Blvd., Culver City, Calif.
Curtis Refrigerating Machine, Div. Curtis Mfg. Co., 1946 Kienlen Av., St. Louis 26.
Cutler-Hammer, Inc., N. 13th St., and W. St. Paul Av., Milwaukee 1.
Cuyahoga Spring Company, 10254 Berea Road, Cleveland 2.

D

• Dahlstrom Machine Works, 4970 N. Elston Av., Chicago 30.
Dahlstrom Metallic Door Co., S. E. Cor. E. Second & Buffalo Sts., Jamestown, N. Y.
Dalco Appliance Co., 1355 Market St., San Francisco 3.
Dalmo-Victor Co., 1414 El Camino Real, San Carlos, Calif.
Dalzen Tool & Mfg. Co., 13650 E. 10 Mile Rd., Detroit 5, Mich.
Damascus Steel Products Corp., 2315 Kishwaukee St., Rockford, Ill.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Dana Fan & Blower Corp., 3501 Colerain Ave., Cincinnati 32, Ohio.
Daniels Mfg. Co., Inc., Sam, Daniels Rd., Hardwick, Vt.
Danzer Metal Works Co., Box 138, Hagerstown, Md.
Dary Company, W. M., Long Beach, Calif.
Davidson Hy Duty Roof Fan Co., 213 California St., Newton, Mass.
Davis & Co., Inc., Dean W., Kentland, Ind.
Davis Regulator Co., 2546 S. Washtenaw Av., Chicago 8.
Davis & Son Machine Works, 5425 Compton Av., Los Angeles 1.
Davison Chemical Corp., Baltimore 3, Md.
Day Co., 810 Third Av., N. E., Minneapolis 13.
Day & Night Div., Affiliated Gas Equipment, Inc., P. O. Box 150, Monrovia, Calif.
Dayton Rogers Mfg. Co., 2330 13th Av., S. Minneapolis 7.
Dayton Rubber Mfg. Co., 2342 W. Riverview Av., Dayton 1, O.
Dearborn Stove Co., 5830 N. Pulaski Rd., Chicago 30, Ill.
Dearborn Stove Co., 1700 W. Commerce St., Dallas 8, Texas.
Debevoise Co., 968 Grand St., Brooklyn 6.
De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Decatur Iron & Steel Co., P. O. Box 72, Decatur, Ala.
Defender Instrument and Regulator Co., 615 Clark Av., St. Louis 2.
Delavan Manufacturing Co., 3007 Sixth Ave., Des Moines 13, Iowa.
• Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester 1, N. Y.
• Delco Products Division, General Motors Corp., 329 E. First St., Dayton, O.
D'Elia Oil Burner Co., Inc., 146 Stratford Ave., Bridgeport 8, Conn.
Delta Mfg. Div., Rockwell Mfg. Co., 620 E. Vienna Ave., Milwaukee 2, Wis.
Deluxe Furnace & Wall Heater Co., P. O. Box 489, Inglewood, Calif.
DeLuxe Oil Burner Co., 2121 First Av., Seattle, Wash.
Demuth & Sons, Charles, 245 Elm Place, Mineola, L. I., N. Y.
Denlston Co., 4856 S. Western Ave., Chicago 9.
Densewood Corporation, Elkhorn, Wis.
Denver Fire Clay Co., 2301 Blake St., Denver 17, Colo.
Deshler Foundry & Machine Wks., 140 S. East Ave., Deshler, O.
• Des Moines Furnace and Stove Repair Co., 107 S. W. Second Ave., Des Moines 5, Ia.
DeSoto Oil Burner Corp., 40 N. Penn St., York, Penn.
Despatch Oven Co., 619 Southeast St., Minneapolis 14.
Detroit Air Conditioning Service Co., 1314 Holden Ave., Detroit 3.
• Detroit Air Filter Company, Box 497, Woodstock, Ill.
Detroit Gas Regulator Co., 742 Rivard St., Detroit 7.
Detroit Hoist & Machine Co., 8202 Morrow St., Detroit 11.
Detroit Lubricator Co., 5900 Trumbull Ave., Detroit 8.
Detroit Moulding Div., L. A. Young Spring & Wire Corporation, 9210 Russell St., Detroit 11.
Detroit Safety Furnace Pipe Co., 5960 Second Blvd., Detroit 2.
Detroit Stamping Co., 350 Midland Ave., Detroit 3.
Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit 11.
Detroit Stoker Co., General Motors Bldg., Detroit 2. (Sales & Engineering); Monroe, Mich. (Main Office & Works).
Detroit Universal Products, 8427 Mack, Detroit.
Devices, Inc., 280 Madison Ave., New York 16, N. Y.
DeVilbiss Co., The, 300 Phillips Ave., Toledo 1, Ohio.
Devoe & Raynolds Co., Inc., 44th St. & 1st Ave., New York City 17.
Diamond Agencies, 133 W. Union St., Pasadena 1, Calif.
Diamond Castings Co., Terra Cotta Rd., Johnsonburg, Pa.
Diamond Expansion Bolt Co., Inc., 500 North Ave., Garwood, N. J.
Diamond Iron Works, Inc., 1723 Second St., N., Minneapolis 11.
Diamond Machine Tool Co., 3429 E. Olympic Blvd., Los Angeles 23, Calif.
Diamond Manufacturing Co., 243 W. 8th St., Wyoming, Pa.
Dicoler Div., General Machine & Mfg. Co., Berwick, Penn.
Dick Co., Inc., R. & J., 34-38 Sade St., Passaic, N. J.
Dickson Co., 7420 Woodlawn Ave., Chicago 19.
Dickson Weatherproof Nail Co., P. O. Box 590, Evanston, Ill.
Dieckmann Co., Ferdinand, 1150 Harrison Ave., Cincinnati 32, O.
Diehl Mfg. Company, Finderne Plant, 1117 Finderne Av., Somerville, N. J.
Diener Mfg. Co., Geo. W., 400 N. Monticello Av., Chicago.
Disston & Sons, Inc., Henry, Unruh & Milnor Sts., Tacony Sta., Philadelphia 35.
Division Lead Co., 826 W. Kinzie St., Chicago 22, Ill.
DoALL Co., 254 Laurel Ave., Des Plaines, Ill.
Dockson Corporation, 3539 Wabash Av., Detroit 8.
Dodge Mfg. Co., 500 S. Union St., Mishawaka, Ind.
Doelger & Kirsten, Inc., 3015 W. Chambers St., Milwaukee 10.
• Dole Valve Co., 1923 W. Carroll Ave., Chicago 12, Ill.
Dollinger Corp., 11 Centre Park, Rochester 3, N. Y.
Domestic Devices, 1495 Warrensville Center Rd., Cleveland.
Domestic Gas Equipment Co., San Francisco 9.
Domestic Mfg. Co., 2922 Western Ave., Seattle 1, Wash.
Domestic Thermostat Co., 2775 Mettler St., Los Angeles 2, Calif.
Dongan Electric Manufacturing Co., 2931 Franklin St., Detroit 7.
Dornbach Furnace & Fdry. Co., 724 E. 152rd St., Cleveland 8.
Dow Chemical Company, Midland, Mich.
• Dowagiac Steel Furnace Co., Beeson St., Dowagiac, Mich.
Downs-Smith Brass & Copper Co., Inc., 394-330 E. 46th St., New York 17.
Doyle & Roth Mfg. Co., 10-16 49th Ave., Long Island City, N. Y.
• Doyle Vacuum Cleaner Co., 235 Stevens St., S. W., Grand Rapids 2, Mich.
• Dravo Corp., Dravo Bldg., Pittsburgh 22, Penn.
Drayer-Hanson, Inc., Box 2315, Terminal Annex, Los Angeles 54.
Dreis Co., Ltd., Edward J., 841 County Rd., San Carlos, Calif.
• Dreis & Krump Mfg. Co., 7404 Loomis Blvd., Chicago 36.
Drico Industrial Corporation, 39 Broadway, New York 6.
Dry-Zero Corp., 333 W. North Bank Drive, Chicago 54.
Dual-Air Fan Corp., P. O. Box 169 South Elgin, Ill.
Dualflame Div., H & K Appliance Co., Lima, Ohio.
Dual-Heat Iron Company, 4370 Sunset Blvd., Los Angeles 27.
Dual Remote Control Co., Garden City, Mich.
• Dual-X Furnace Mfg. Co., 6560 S. Wentworth Ave., Chicago 21, Ill.
Dunn-Rite Products, P. O. Box 397, Garden City, Mich.
Duo-Therm Div., Motor Wheel Corp., Lansing 5, Mich.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
Durakool, Inc., 1010 N. Main St., Elkhart, Ind.
Durex Co., 20 N. Wacker Dr., Chicago.
Duriron Co., Inc., 480 N. Findlay St., Dayton 1, O.
Dust Suppression & Engineering Co., 154 Grove St., Lake Orion, Mich.
Dwyer Mfg. Co., F. W., 317 S. Western Av., Chicago 12.

E

Eagle-Picher Co., American Bldg., Central Pkwy. & Walnut, Cincinnati 1.
East Coast Co., 141 Milk St., Boston 9, Mass.
Earl Co., Warren, 3409 McKinney Av., Houston, Tex.
Eastern Air Devices, Inc., 130 Flatbush Ave., Brooklyn 17, N. Y.
Eastern Oil & Equipment Co., 27 Portland St., Portland 1, Me.
Eastern Stainless Steel Corporation, P. O. Box 1975, Baltimore 3, Md.
Easyheat Incorporated, 1601 Eastlake Av., Seattle 2, Wash.
Eav-Tex Co., 307 Lincoln Av., Havertown, Pa.
Eckhart Mfg. Co., Inc., Lehigh Ave., Union, N. J.
Eclipse Air Brush Co., 390 Park Ave., Newark 7, N. J.
Eclipse Fuel Engineering Co., 707 S. Main St., Rockford, Ill.
Eclipse-Pioneer Div., Bendix Aviation Corp., Teterboro, N. J.
Economo Gas Products Co., 8832 Michigan Av., Detroit 16.
Eddy Stoker Corp., 4717 W. North Av., Chicago 39.
Edison, Inc., Thomas A., Instrument Div., Lakeside Av., West Orange, N. J.
Edwards Furnace Co., 35 East Av., Wellsboro, Pa.
Edwards Mfg. Co., Inc., 337 Eggleston Av., Cincinnati 2, O.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Eiermann Floor Scraper Co., 102 E. Market St. (rear), York, Pa.
• Eisbach, Albert N., 755 Central, Dubuque, Iowa.
Eisler Engineering Co., 751 S. 13th St., Newark 3, N. J.
Elco Tool & Screw Corp., 1500 Broadway, Rockford, Ill.
Electric Arc, Inc., 152 Jelliff Av., Newark 8, N. J.
Electric Controller & Mfg. Co., 2700 E. 79th St., Cleveland 4.
Electric Furnace-Man, Inc., 4th & Furnace Sts., Emmaus, Pa.
Electric Machinery Mfg. Co., 1137 Tyler St., N. E., Minneapolis 13.
Electric Motor Corp., Div. Howard Industries, Inc., Racine, Wis.
Electric Soldering Iron Co., Inc., W. Elm St., Deep River, Conn.
Electric Sprayit Co., 1415 Illinois Av., Sheboygan, Wis.
Electrical Maintenance & Engineering Co., 12535 Euclid Av., Cleveland 12.
Electrimatic Div., The Simonis Co., 2100 Indiana Av., Chicago 16.
Electro Dustless Painting, Inc., 1051 New Britain Av., Elmwood 10, Conn.
Electroaire Corp., 41-38 37th St., Long Island City 1, N. Y.
Electro Dynamic Div., Electric Boat Co., Bayonne, N. J.
Electro Lift, Inc., 33 Church St., New York 7.
Electro-Watt Inc., Mercer & Aurora, Seattle 9, Wash.
• Electrol Burner Manufacturing Co., Inc., 23 Union Av., Rutherford, N. J.
Electroloy Co., Inc., 360 N. Michigan Ave., Chicago 1, Ill.
Electromode Corporation, 45 Crouch St., Rochester 3, N. Y.
Electronic Products Co., St. Charles, Ill.
Electrovent Corp., 5245 Western Av., Detroit 10, Mich.
Electrovent Fan & Mfg. Co., 312 W. Lake St., Chicago 7.
• Elgo Shutter & Mfg. Co., 3738 W. Warren Av., Detroit 8.
Ellison Draft Gage Co., 314 W. Kinzie St., Chicago 10.
Elmwood Manufacturing Co., 3145 Chestnut St., Detroit 7.
• Emerson Electric Mfg. Co., 8100 Florissant Av., St. Louis 21.
Empire Door Co., Inc., 431 Southern Blvd., New York 55, N. Y.
Empire Metal Co., 820 E. Water St., Syracuse, N. Y.
Empire Stove Company, Belleville, Illinois.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

• Empire Ventilation Equipment Co., 35-129 Vernon Blvd., Long Island City 1, N. Y.
• Enderle, Inc., Ltd., Frank X., 1715 San Fernando Rd., Los Angeles 41.
Engelhard, Inc., Chas., 900 Passaic Av., East Newark, N. J.
Enterprise Foundry, Inc., 1123 E. "B" St., Belleville, Ill.
Erdie Perforating Co., 171 York St., Rochester 11, N. Y.
Ergolyte Mfg. Co., 3627 N. Lawrence St., Philadelphia 40.
Esslgroth & Co., 22 Edison Pl., Newark 2, N. J.
Ess Instrument Co., 98 Washington Av., Bergenfield, N. J.
Essick Mfg. Co., 1950 Santa Fe Av., Los Angeles 21.
Estate Heatrola Division, Noma Electric Corporation, P. O. Box 418, Hamilton, Ohio.
Etched Products Co., 3901 Queens Blvd., Long Island City 4.
Euclid Crane & Hoist Co., 1365 Chardon Rd., Euclid 17, Ohio.
Eutectic Welding Alloys Corporation, 40 Worth St., New York City 13.
Evans Products Co., Heating & Appliance Div., Plymouth, Mich.
Even-Air Mfg. & Sales Co., 13931 Hamilton Av., Detroit 3.
Evererete Corporation, 19 W. 44th St., New York City.
EverHot Heater Company, 5189 Wesson Av., Detroit 10.
Everhot Mfg. Co., 67 S. 19th Av., Maywood, Ill.
Everhot Products Co., 2059 W. Carroll Av., Chicago 12.
Eveready Supply Company, 2207 Gaston Av., Dallas 2, Texas.
Excel Heating & Air Conditioning Co., 3715 Belmont Av., Chicago 18.
Excelsior Steel Furnace Co., 118 S. Clinton St., Chicago 6.
Excelsior Stove & Mfg. Co., 510 S. Front St., Quincy, Ill.
Excelsior Tool & Machine Co., 31st & Ridge Av., East St. Louis, Ill.
Expert Welding Machine Company, 17144 Mt. Elliott St., Detroit.
Extruded Plastics, Inc., New Canaan Av., Norwalk, Conn.

F

F & E Manufacturing Co., Box D, Centerville, Calif.
Fafnir Bearing Co., 37 Booth St., New Britain, Conn.
Fairbanks, Morse & Co., 600 S. Michigan Av., Chicago 5.
Fairfield Oil Heating Co., Inc., Greenwich, Conn.
Fairmont Aluminum Co., P. O. Box 912, Fairmont, W. Va.
Fairmount Tool & Forging Co., 10612 Quincy Av., Cleveland 6.
• Fallsington Manufacturing Co., Fallsington, Penn.
Falstrom Co., 18 Falstrom Court, Passaic, N. J.
Famco Machine Company, 1314 Eighteenth St., Racine, Wis.
• Famous Furnace Co., 6420 Woodland Ave., Cleveland 4, Ohio.
Farquhar Furnace Co., 230 Owens Av., Wilmington, Ohio.
Farr Co., 2638 Southwest Dr., Los Angeles 43.
Farrelloy Co., 1343 N. 26th St., Philadelphia 21.
Farris Furnace Co., 920-930 Enos Av., Springfield, Ill.
Fasco Industries, Inc., Box 509, Rochester 3, N. Y.
Faultless Heater Corp., 10217 St. Clair Av., Cleveland.
FauceHot Heater Co., LaPorte, Ind.
Favorite Stove Co., 440 Weber St., Piqua, O.
Feathertouch Products, Inc., 757 W. Venice Blvd., Los Angeles 15.
Federal Machine & Welder Co., Overland Ave., Warren, Ohio.
Federal Machinery Company, 134 Grand St., New York 13.
Federated Metals Division, American Smelting and Refining Company, 120 Broadway, New York 5, N. Y.
Fee & Mason Mfg. Co., Manasquan, N. J.
Fee & Stemwedel, Inc., 2210 Wabansia Av., Chicago 47.
Felters Co., Inc., 210 South St., Boston 11.
Ferdon Equipment Engineering Co., 26 Evans Place, Hillside, N. J.
Fern, Ralph, 2817 Boulevard Av., Scranton 9, Pa.
• Field Control Div., H. D. Conkey & Co., Drawer 111, Mendota, Illinois.
Fieser Co., F. J., 54 W. 21st St., New York 10.
Figge Company, 1734 W. Ogden Av., Chicago 12.
Filkins, Inc., Edward, 308 W. Washington St., Chicago 6, Ill.
Finger, Joe, 7907 Madison Av., Cleveland 2.
Fingles Co., Reisterstown Rd. at Elgin Av., Baltimore 17.
Finn Engineers, Jerry, N-201 First National Bank Bldg., St. Paul 1, Minn.
Firecraft Corporation, 3110 W. 51st St., Chicago 32.
Fireline Stove & Furnace Lining Co., 1816 Kingsbury St., Chicago 14.
Firestone Tire & Rubber Co., Firstone Park, Akron 17, O.
Firewel Co., Inc., 1042 Clinton St., Buffalo 6, N. Y.
Fisher Brass Foundry, 5332 S. Santa Fe Ave., Los Angeles 11, Calif.
Fisher Governor Co., 202 First Av., Marshalltown, Ia.
Fitzgibbons Boiler Co., Inc., 101 Park Ave., New York City 17, N. Y.
• Flagler Mfg. Co., Roy G., 19321 Filer Ave., Detroit, Mich.
Flemm Lead Co., Inc., Bradley Av. & School St., Long Island City 1, N. Y.
Flexible Tubing Corp., Branford, Conn.
Flintkote Co., 30 Rockefeller Plaza, New York 20.
Flood Co., 6217 Carnegie Av., Cleveland.
Floral City Heater Co., 402 S. Monroe St., Monroe, Mich.
Florence Stove Co., 205 School St., Gardner, Mass.
Floridin Co., Drawer 143, Warren, Pa.
Fluid Heat Division Anchor Post Products, Inc., 6720 Eastern Av., Baltimore 24, Md.
Flux-All Chemical Products, 4018 Tenth Av., New York 34.
Flynn & Emrich Co., 301 Holliday St., Baltimore 2.
• Follansbee Steel Corp., Third & Liberty Ave., Pittsburgh 30.
Folsom Company, Inc., Cirklair Products Div., 3104 Oak Lane, Dallas 19, Tex.
Folsom Snow Guard Co., 336 Union St., Millis, Mass.
Foote Foundry Co., J. B., N. Main St., Fredericktown, O.
Ford Blow Pipe & Manufacturing Co., 395 Poplar Av., Memphis 1, Tenn.
Ford Chain Block Div., American Chain & Cable Co., Inc., York, Penn.
Ford Motor Co., Dearborn, Mich.
Ford Roofing Products Co., 188 W. Randolph St., Chicago 1, Ill.
Forest City Foundries Co., Niagara Furnace Division, 2500 W. 27th St., Cleveland 13.
Form-Weld Co., Inc., 660 Minnesota St., San Francisco 7, Calif.
Fossum Mfg. Co., M. H., 1565 Como Av., St. Paul, Minn.
Fox Noiseless Hammer Co., 619 MacDade Blvd., Collingdale, Penn.
Foxboro Co., 38 Neponset Ave., Foxboro, Mass.
Fram Corp., Providence 16, R. I.
• Franck & Fric, 7109 Kinsman Rd., Cleveland 4, Ohio.
Franklin Electric Co., Inc., 116 E. Washington St., Bluffton, Ind.
Fraser & Johnston Co., 1900 17th St., San Francisco 3, Calif.
Frayn Co., N. J., P. O. Box 1005, Redwood City, Calif.
Frederick Iron & Steel, Inc., Frederick, Md.
Freed Heater & Stoker Co., 1343 Widener Bldg., Philadelphia 7.
Freed Products Co., 1510 Third Ave., Moline, Ill.
Freeport Burner & Fan Co., Freeport, Ill.
Fresh Air Circulator Co., 2108 Navigation, Houston 3, Tex.
Fresh'nd-Aire Co., 221 N. LaSalle St., Chicago 1.
• Frey & Co., Frank P., 3634 W. Madison St., Chicago 12, Ill.
Frick Co., W. Main St., Waynesboro, Pa.
Fried Air-Kool Co., 2920 Grand River, Detroit 1, Mich.
Friedley-Voshart Co., 783 W. Lexington St., Chicago 7.
Friendly Furnace & Foundry Co., 2405 E. Fourth St., Sioux City 19, Ia.
Fries Instrument Div., Bendix Aviation Corp., Taylor Av. & Loch Raven Blvd., Baltimore 4, Md.
Frigidaire Div., General Motors Corp., 300 Taylor St., Dayton 1, O.
• Front Rank Furnace Co., Div. Liberty Foundry Co., 2500 Ohio Av., St. Louis 4.
Fry Reglet Co., 1725 N. Pennsylvania Ave., P. O. Box 411, Bremerton, Wash.
Fuel Savers, Inc., 1501 Herr St., Harrisburg, Pa.
Fulton Sylphon Co., Box 400, Knoxville 4, Tenn.
Furbio Co., Hermansville, Mich.
Fusion Engineering, 4504 Superior Ave., Cleveland 3, Ohio.

G

G. M. Manufacturing Co., 50 W. Third St., New York 12.
G. & O. Mfg. Co., 138 Winchester Av., New Haven 8, Conn.
• G. & S. Machine Shop, 8700 Grinnell, Detroit 13, Mich.
• Gallaher Co., The, Owatonna, Minn.
• Galvan Manufacturing Co., Box 367, New Albany, Ind.
Galv-Weld Products, P. O. Box 37, Sta. D, Dayton 10, Ohio.
Gammeter Co., W. F., Lincoln Av. Extension, Cadiz, O.
Garden City Fan Co., 232 S. Michigan Blvd., Chicago 4.
Garden City Laboratory, Inc., Div. Pritchardsons, 3744 W. 37th Pl., Chicago 32.
Gasco Industries, Inc., 2054 National Bank Bldg., Detroit 26.
Gas & Oil Industry Laboratories, Inc., 4 Paine Av., Irvington 11, N. J.
Gates Rubber Co. Sales Div., Inc., 999 S. Broadway, Denver 17, Colorado.
Gaul Air Conditioner Co., 3110 N. Main St., Dayton 5, O.
Gehri Co., 1117 Tacoma Ave., Tacoma 3, Wash.
Geisel Manufacturing, Inc., 61 West Av., Elyria, Ohio.
Gematic Burner Co., 16820 Miles Av., Cleveland 23.
• General Blower Co., 8500 Ferris Av., Morton Grove, Ill.
General Blower Co., Inc., 6137 Market St., Philadelphia 39.
• General Controls Co., 501 Allen Av., Glendale 1, Calif.
General Corporation, 3353 University Av., Minneapolis 14.
General Die and Stamping Co., 362 Mott St., New York 12, N. Y.
General Electric Co., Appliance & Merchandise Dept., 1285 Boston Av., Bridgeport 3, Conn.
General Electric Co., Automatic Heating Div., 5 Lawrence St., Bloomfield, N. J.
• General Electric Co., 1 River Rd., Schenectady 5, N. Y.
General Electric Co., Nela Park, Cleveland 12.
General Engineering & Mfg. Co., 4417 Oleatha St., St. Louis 16, Mo.
• General Filters, Inc., 12890 Westwood Av., Detroit 23.
General Gas Light Co., 201 N. Park St., Kalamazoo 11F, Mich.
General Machine Co., Inc., Fourth & Furnace Sts., Emmaus, Pa.
General Machinery Co., 3500 Riverside Av., Spokane 1, Wash.
• General Oil Burner Corp., 2300 Sinclair Lane, Baltimore 13.
General Oil Heating Corp., 232-6 55th St., West New York, N. J.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

General Plate Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
General Refrigeration Div., Yates-American Machine Co., Shirland Av., Beloit, Wis.
General Scientific Equipment Co., 27th & Huntingdon Sts., Philadelphia 32.
General Sheet Metal Works, Inc., Silliman Av. & Ash St., Bridgeport 5, Conn.
General Water Heater Corp., Front St., & Magnolia Blvd., Box 471, Burbank, Calif.
General Wesco Stove Co., 521 N. Jefferson Ave., Springfield 2, Mo.
• Gerett Corp., M. A., 724 W. Winnebago St., Milwaukee 5, Wis.
Gerhardt, W. F., 2007 W. Broad St., Richmond 20, Va.
Gerhardt Co., Inc., George T., 1030 Golden Gate Ave., San Francisco, Calif.
Gerstein & Cooper Co., 1 W. Third St., South Boston 27, Mass.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gillen Co., J. L., Dowagiac, Mich.
Gilmer Co., L. H., Div. United States Rubber Co., Cottman & Keystone Sts., Tacony, Philadelphia 35.
Gisholt Machine Co., 1263 E. Washington Av., Madison 10, Wis.
• Glasby Mfg. Co., Inc., J. P., Montgomery & Willett Sts., Belleville 9, N. J.
Glaser Lead Co., Inc., 81 Wyckoff Av., Brooklyn 37, N. Y.
Glenn-Roberts Company, P. O. Box 12, Fruitvale Sta., Oakland 1, Calif., and 2107 Adams St., Indianapolis 1, Ind.
Glidden Co., 11001 Madison Av., Cleveland 2.
Globe Iron Roofing & Corrugating Co., Newport, Ky.
Globe Machinery & Supply Co., E. 1st & Court Av., Des Moines 6, Ia.
Globe Roofing Products Co., Inc., 2207 Schrage Av., Whiting, Ind.
Goergen-Mackwirth Engineering Company, 813 Sycamore St., Buffalo 12.
• Goose Mfg. Co., 2548 N. 18th St., Milwaukee 6, Wis.
Goethel Sheet Metal Works, Inc., Alfred, 1913 N. Killian Pl., Milwaukee 12.
Goetti Bros., 714 S. Central Av., Phoenix, Ariz.
Golden-Anderson Valve Specialty Co., Keenan Building, Pittsburgh 22, Pa.
Golden Gate Sheet Metal Works, 1422 14th Ave., Oakland 6, Calif.
Golden's Foundry & Machine Co., P. O. Box 96, Columbus, Ga.
Goldsmith Metal Lath Co., 4501 Chickering Ave., Cincinnati 32, Ohio.
Goodfriend Fib. & Htg. Burner Sales, 13931 Hamilton, Detroit.
Goodrich Co., B. F., 500 S. Main St., Akron, O.
Goodyear Tire & Rubber Co., Inc., 1144 E. Market St., Akron 16, Ohio.
Goss Gas Products Co., 5209 Baum Blvd., Pittsburgh 24, Penn.
Gouran, Inc., Mark F., 7309 Boyer St., Philadelphia 19, Penn.
Governair Corp., 513 N. Blackwelder, Oklahoma City 1, Okla.
Graham Hambly Co., 3625 S. Grand Av., Los Angeles 7, Calif.
Grand Island Furnace & Supply Co., 356 N. Elm St., Grand Island, Nebr.
Grand Rapids Wire Products Co., 502 Front Av., N. W., Grand Rapids 4, Mich.
Granite City Steel Co., 20th & Madison Av., Granite City, Ill.
Gray, G. L., 295 East St., P. O. Box 520, New Haven 3, Conn.
Gray & Dudley Co., 2300 Clifton Rd., Nashville, Tenn.
Gray Metal Products, Inc., 33 Carleton St., Rochester, N. Y.
Grayson Controls Div., Robertshaw-Fulton Controls Company, 3000 Imperial Highway, Lynwood, Calif.
Grayson-Greenamyer, Inc., P. O. Box 68, Monrovia, Calif.
Gray-Wilson Company, 6460 Kercheval Av., Detroit 7.
Great Lakes Steel Corporation, Ecorse, Detroit 18.
Great National Air Conditioning Corp., Subsidiary of U. S. Air Conditioning Corp., 342 Oklahoma Natural Bldg., Oklahoma City, Okla.
Green Colonial Furnace Company, 322 S. W. Third St., Des Moines 7, Ia.
Green Fire Brick Co., A. P., Mexico, Mo.
Greenberg's Sons, M., 765 Folsom St., San Francisco 7.
Green Fire Brick Co., A. P., Mexico, Mo.
Gregory Company, J. G., 228 N. LaSalle St., Chicago 1.
Grinnell Co., Inc., 260 W. Exchange, Providence 1, R. I.
Griscom-Russell Co., The, 285 Madison Av., New York 17.
Griswold Mfg. Co., 1001-1045 W. 13th St., Erie, Pa.
Grob Brothers, Grafton, Wis.
Gross-Aire Mfg. Co., 9416 W. Milton Ave., St. Louis 14, Mo.
Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12.

H

H-A Mfg. Co., 444 Salem Ave., York, Penn.
H-B Instrument Co., 2632 Trenton Ave., Philadelphia 25, Penn.
H & H Research Co., 6303 Horatio Ave., Detroit 10.
H-P Products, Inc., 510 W. Broad St., Louisville, Ohio.
H P L Mfg. Co., 2015 E. 65th St., Cleveland 3.
Hague & Co., Alfred, 224 34th St., Brooklyn 32, N. Y.
Haines Gauge Company, Inc., 2301 W. Allegheny Av., Philadelphia 32.
• Hall-Neal Furnace Co., 1324 N. Capitol Ave., Indianapolis 7.
Hamilton Tool Co., Ninth St. at Hanover, Hamilton, Ohio.
Hamler Boiler & Tank Co., 6035 W. 66th St., Chicago.
Hammel Radiator Engineering Co., 3348 Motor Av., Los Angeles 34.
Hammett Electric Mfg. Co., 706 E. Eighteenth St., Kansas City 6, Mo.
Hammond Machinery Builders, Inc., 1694 Douglas Av., Kalamazoo 54, Mich.
Hampton Electric Mfg. Co., 1338 Voskamp St., Pittsburgh 12.
Handees Co., Dept. R-161, Bloomington, Ill.
Handelan Washed Air Co., 4006 Washburn Av., South, Minneapolis.
• Handley-Brown Heater Co., 2501 Brooklyn Rd., Jackson, Mich.
Handy & Harman, 82 Fulton St., New York City 7.
Hanlan Company, 1416 W. Jefferson Blvd., Los Angeles 7.
Hansen Electric Co., 630 Valencia St., San Francisco 10.
Hansen Mfg. Co., Inc., Princeton 6, Ind.
Hanson-Gates Mfg. Co., Inc., 174 Lowell St., Reading, Mass.
Harnischfeger Corp., 4400 W. National Ave., Milwaukee 14.
Harper Company, H. M., 8200 Lehigh Ave., Morton Grove, Ill.
Harrington Co., 1640 W. Callowhill St., Philadelphia 30.
• Harrington & King Perforating Co., 5649 Fillmore St., Chicago 44.
Harris, A. R., 4546 Hohman Ave., Hammond, Ind.
Harris Calorific Co., 5501 Cass Av., N. W., Cleveland 2.
Harris Machinery Co., 502 30th Ave., S. E., Minneapolis 14, Minn.
Harrison Sheet Steel Co., 4715 W. Fifth Av., Chicago 44.
• Hart & Cooley Mfg. Co., 500 E. Eighth St., Holland, Mich.
Hart & Crouse Corp., 109 N. Warner St., Oneida, N. Y.
Hart Furnace and Supply Co., 238 E. Main St., Louisville 2, Ky.
Hart Mfg. Co., Bartholomew & Hamilton Sts., Hartford 1, Conn.
Hart-Mun Furnace Co., 2507 E. 15th St., Tulsa 5, Okla.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., 1625 Roosevelt Av., Piqua, O.
Harvey Machine Co., Inc., 19200 S. Western Av., Torrance, Calif.
Harvey, Inc., Sid, 106 E. Minola Av., Valley Stream, N. Y.
Harvey-Whipple, Inc., 55 Emory St., Springfield 1, Mass.
Haske Utilities Company, 879 Tenth Ave., New York 19, N. Y.
Haskins Co., R. G., 2651 W. Harrison St., Chicago 12, Ill.
Hassall, Inc., John, Clay & Oakland Sts., Brooklyn 22.
Hastings Air Conditioning Company, Inc., Box 474, 108 S. Colorado Av., Hastings, Nebr.
Hastings Instrument Company, Inc., P. O. Box 1275, Hampton, Va.
Hauck Manufacturing Co., 124-136 Tenth St., Brooklyn 15.
Hauserman Co., E. F., 6800 Grant Av., Cleveland 5.
Hayes Furnace & Mfg. Co., 2929 S. Fairfax Ave., Los Angeles 16, Calif.
Hays Corp., 752 E. Eighth St., Michigan City, Ind.
Hays Mfg. Co., 801 W. 12th St., Erie, Pa.
Healy Ruff Co., 765 Hampton Av., St. Paul 4, Minn.
Heartley Machine & Tool Co., 900-8 Summit St., Toledo, O.
Heatcraft Co., 2434 Crittenden Dr., Louisville 12, Ky.
Heath & Milligan Mfg. Co., Div. of The Glidden Co., 1335 S. Normal Ave., Chicago.
Heat Hustler, Box 904, Bloomington, Ill.
Heating Assurance, Inc., 124 E. Augusta Av., Spokane 12, Wash.
Heating Equipment Manufacturing Co., 600 Indiana St., San Francisco 7.
Heating Research Corporation, 516 North Jefferson, Muncie, Ind.
Heating Specialties Co., Carroll P. O., Baltimore 29, Md.
Heatlox Furnaces, Inc., 4320 S. Tacoma Way, Tacoma 9, Wash.
Heat-Seal Burner Company, 2018 Cuming Av., Omaha 2, Nebr.
Heat-Timer Corporation, 150 Fifth Av., New York 10.
Heat-Well Manufacturing Co., 1526 Park Av., Emeryville 8, Calif.
Heckethorn Mfg. & Supply Co., Littleton, Colo.
Hedges Mfg. Co., Inc., M. M., 700 E. Main St., Chattanooga 8, Tenn.
Heetrilter Co., 600½ E First St., Newberg, Ore.
Hegeler Zinc Co., P. O. Box 589, Danville, Ill.
Heil Co., 3000 W. Montana St., Milwaukee 1, Wis.
Hel-Mor Burner Company, 1735 Concord Av., Detroit 7.
Hemp & Company, Inc., Macomb, Ill.
Hemphill Co., A. D., Lake City, Minn.
Henderson & Co., Peter, 35 Cortland St., New York 7.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Hendley & Whittemore Co., 6 Blackhawk Blvd., Beloit, Wis.
Hendrick Mfg. Co., 37 Dundaff St., Carbondale, Pa.
Henkel-Clauss Co., Fremont, Ohio.
Henry & Wright Div., Hartford-Empire Co., 755 Windsor St., Hartford 1, Conn.
• Henry Furnace Co., Medina, Ohio.
Herbert & Sons, R. D., 6th & Harrison St., Nashville 4, Tenn.
Herco Oil Burner Corp., 109 W. Chestnut St., Lancaster, Pa.
Hercules Chemical Co., Inc., 332 Canal St., New York 13.
Hercules Electric & Mfg. Co., Inc., 2500 Atlantic Av., Brooklyn 7.
Herd Utilities, Inc., 302 Canal St., Providence 3, R. I.

• Advertisement in this issue. See Index to Advertisers, page 92-D.

Heremetal Company, 1310 Aldrich Av., N. Minneapolis 11.
Herrmann & Grace Co., 671 Bergen St., Brooklyn, N. Y.
Herron-Zimmers Molding Co., 5900 E. Outer Drive, Detroit.
Hershey Machine and Foundry Co., Manheim, Pa.
• Hess-Snyder Co., Massillon, Ohio.
• Hess Co., The, 1855 S. 54th Ave., Chicago 50, Ill.
Hetzel Roofing Products Co., 67 Main St., Newark 5, N. J.
Hexacon Electric Co., 275 W. Clay Ave., Roselle Park, N. J.
Hexdall, A. M., Morris, Ill.
Highland Engineering Co., 1742 Berkeley St., Santa Monica, Calif.
Hill and Co., E. Vernon, 6836 W. Highland Ave., Chicago 31, Ill.
Hill-Chase & Co., Inc., 2223 E. Ontario St., Philadelphia, 34.
Hillwood Manufacturing Co., 21400 St. Clair Av., Cleveland 17.
Hilo Varnish Corp., 42-40 Stewart Ave., Brooklyn 4, N. Y.
Hinde & Dauch Paper Co., P. O. Box 561, Sandusky, Ohio.
Hi-Qua Mfg. Co., 4709 Griscom St., Philadelphia 24.
Hirsh Manufacturing Co., P. O. Box 67, Garland, Texas.
Hirschman-Pohle Co., Inc., 9 Lent Av., LeRoy, N. Y.
Hobart Brothers Co., Canal Lock Square, Troy 1, Ohio.
Hobsite Products Co., Inc., 835 River St., Paterson 4, N. J.
Hodell Chain Co., 3924 Cooper Av., Cleveland 3.
Holcomb & Hoke Mfg. Co., Inc., 1545 Van Buren St., Indianapolis 7.
Holden Fan Co., 2563 Danforth, Detroit 12.
Hollup Corp., Div. National Cylinder Gas Co., 4700 W. 19th St., Chicago 50.
Holly Manufacturing Company, 875 S. Arroyo Parkway, Pasadena 1, Calif.
Hollywood Water Heater Co., 4601 Brazil St., Los Angeles 26, Calif.
Holtzer-Cabot Electric Co., Div. First Industrial Corporation, 125 Amory St., Boston 19.
HomEase Products Division, Bogue Electric Co., Inc., 52 Iowa Av., Paterson 3, N. J.
Home Furnace Co., 6th St. & P. M. R. R., Holland, Mich.
Homer Furnace & Foundry Corporation, Coldwater, Mich.
Hones, Inc., Charles A., 122 S. Grand Av., Baldwin, N. Y.
Hood Co., B. Mifflin, Daisy, Tenn.
Hook & Ackerman, Inc., 18 E. 41st St., New York 17, N. Y.
Hook & Miller, 120 Latham St., Pittsburgh 6, Penn.
Horn Co., Inc., A. C., 43-36 Tenth St., Long Island City 1, N. Y.
Horn-Sullivan Company, 727 Brannan St., San Francisco 3, Calif.
Horsman-Markin Corp., 2141 Penobscot Bldg., Detroit 26.
• Hossfeld Mfg. Co., 460 W. Third St., Winona, Minn.
Hot Boy Div., The Coroaire Heater Corp., 2021 E. 14th St., Cleveland 15, Ohio.
Hotentot Co., Inc., 2433 Farnham St., Omaha 2, Nebr.
Hotstream Heater Co., 2363 E. 69th St., Cleveland 4, Ohio.
Houston Blow Pipe & Sheet Metal Works, 113 Broadway, Houston 1, Texas.
Howe Ice Machine Co., 2825 Montrose Av., Chicago 18.
Howell Engineering Corp., P. O. Box 111, Oregon, Ill.
Howes-Woods Co., 310 Bridge St., Cambridge 41, Mass.
Hoyt Heater Co., 2146 E. 25th St., Los Angeles 11.
Hoyt Heater Co. of No. Calif., 936 High St., Oakland, Calif.
Hub Specialty Co., 53 Salem St., Reading, Mass.
Hubbell Corp., 319 N. Albany Av., Chicago 12.
Huck Manufacturing Company, 2480 Bellevue Av., Detroit 7.
Hueller Mfg. Co., Inc., H. J., 559 Rogers Ave., Brooklyn 25.
Hull Enterprises, 3117 Venice Blvd., Los Angeles 6, Calif.
Hunter Fan & Ventilating Co., 400 S. Front St., Memphis 2, Tenn.
Hupp Corporation, Globe Stamping Div., 1250 W. 76th St., Cleveland 1.
• Hussey & Co., C. G., 2850 Second Av., Pittsburgh 19.
Hutchinson Burner & Mfg. Co., 517 N. Main, Hutchison, Kansas.
Huwer Heating Corp., R. R. 3, Milford, Mich.
Huyette Co., Inc., Paul B., 401 N. Broad St., Philadelphia 8.
Hyman & Sons, Joseph, Tioga, Livingston and Almond St., Philadelphia 34.
Hynes & Cox Electric Corp., 406 N. Pearl St., Albany, N. Y.

I

Ice Air Conditioning Co., Inc., 794 Union St., Brooklyn 15.
Ideal Electric & Mfg. Co., E. First & Oak Sts., Mansfield, O.
Ideal Heating Corporation, 307 E. Gage Av., Los Angeles 1.
Ideal Industries, Inc., 1684 Park Av., Sycamore, Ill.
Ideal Products Company, 71 Lake Dr., Oshkosh, Wis.
Iden Co., 1805 N. Milwaukee Ave., Chicago, Ill.
Ilg Electric Ventilating Co., 2850 N. Crawford Av., Chicago 41.
Illinois Bronze Powder Co., Inc., 2022 S. Clark St., Chicago 16.
Illinois Engineering Co., 2035 S. Racine Av., Chicago 8.
Illinois Iron & Bolt Co., Freeman Stoker Div., 914 S. Michigan Av., Chicago 5.
Illinois Testing Laboratories, Inc., 420 N. LaSalle St., Chicago 10.
Illinois Zinc Co., 2959 W. 47th St., Chicago 32.
Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago 7, Ill.
Imperial Electric Co., 64 Ira Av., Akron 9, O.
Independence Stove & Furnace Co., Cor. Hayward & Cottage, Independence, Mo.
Independent Nail & Packing Co., P. O. Box N, Bridgewater, Mass.
Independent Pneumatic Tool Co., Aurora, Ill.
• Independent Register Co., 2747 E. 93rd St., Cleveland, 5.
Industrial Brownhoist Corp., 135 Washington, Bay City, Mich.
Industrial Engineering Corp., 206 N. Ninth St., Terre Haute, Ind.
Industrial Mfg. & Engineering Co., 2845 N. Ravenswood Av., Chicago 13.
Industrial Screw Company, 711 W. Lake St., Chicago 6.
Industrial Service Laboratories, 7656 W. Forest Home Av., Milwaukee 14.
Inferno Co., P. O. Box 1128, Shreveport 90, La.
Infra Insulation, Inc., 10 Murray St., New York, N. Y.
Ingersoll-Rand Co., 11 Broadway, New York 4, N. Y.
Ingersoll Steel Div., Borg-Warner Corp., 310 S. Michigan Ave., Chicago 4, Ill.
Ingram Machinery Co., P. O. Box 205, Picher, Okla.
Inland Steel Co., 38 S. Dearborn St., Chicago 3.
Inland Steel Container Co., 6532 S. Menard St., Chicago 38, Ill.
• Inland Steel Products Company, 4022 W. Burnham St., Milwaukee 1.
Insto-Gas Corporation, 1977 E. Woodbridge St., Detroit 7.
Insulating Equipment, Inc., 39 S. LaSalle St., Chicago 3.
Insulation & Refractories Co., Williamson, N. Y.
Insulite Div., Minnesota and Ontario Paper Co., 500 Baker Arcade Bldg., Minneapolis 2.
Inter-Coastal Paint Co., 15th & Southern R. R., East St. Louis, Ill.
International Engineering, Inc., 1145 Bolander, Dayton 1, O.
International Heater Co., 101 Park Av., Utica 2, N. Y.
• International Metal Products Co., 528 S. 15th St., Phoenix, Ariz.
International Nickel Co., Inc. 67 Wall St., New York City 5, N. Y.
International Oil Burner Co., Park & Spring, St. Louis 10.
International Register Co., 2620 W. Washington Blvd., Chicago 12.
International Sales Co., 2045 Evans Av., San Francisco 24.
International Steel Co., 1556 Edgar St., Evansville, Ind.
International Vermiculite Co., Girard, Ill.
Interstate Machinery Co., Inc., 1433 W. Pershing Road, Chicago 9.
Interstate Sales Co., 122 E. 18th St., New York 3, N. Y.
Iona Ventilator Co., Inc., 2821-29 W. Dauphin St., Philadelphia 32, Penn.
Iowa Paint Mfg. Co., 118-20 Eighth St., Des Moines 9, Ia.
Iron Lung Ventilator Co., 4019 Prospect Ave., Cleveland 3, Ohio.
Iron Fireman Mfg. Co., 3121 W. 106th St., Cleveland 11, 4784 S. E. 17th St., Portland, Ore.
Irvington Varnish and Insulator Co., 6 Argyle Terrace, Irvington 11, N. J.
Iwan Brothers, Inc., 1503 Prairie Ave., South Bend 14, Ind.

J

J & J Sheet Metal Co., 22836 Hoover Rd., Van Dyke, Mich.
Jabsco Pump Co., 2031 N. Lincoln, Burbank, Calif.
Jack & Heints Precision Industries Inc., 17600 Broadway, Cleveland 1.
Jackes-Evans Mfg. Co., 4400 N. Union Blvd., St. Louis 15, Mo.
• Jackson & Church Co., 321 N. Hamilton St., Saginaw 65, Mich.
Jackson Co., Byron, P. O. Box 2017, Terminal Annex, Los Angeles 54.
Jackson Co., Thomas M., Box 2091, Detroit 31, Mich.
Jackson G. Gilmore & Co., 167 E. State St., Columbus 15, Ohio.
Jackson Gas Burner Corp., 3781 Quincy Av., Detroit 4.
Jaden Mfg. Co., 1601 W. 2nd St., Hastings, Nebr.
Jae Manufacturing Co., Mt. Clemens, Mich.
James Regulator Co., Inc., 232 Peacock St., Pottsville, Pa.
Jamestown Metal Corp., 104 Blackstone Av., Jamestown 6, N. Y.
Jan-Air, Inc., Richmond, Ill.
Jefferson Electric Co., 25th & Madison St., Bellwood, Ill.
Jefferson Machine Tool Co., Fourth, Cutter & Sweeney Sts., Cincinnati 3.
Jenn Air Products Co., 409 Architects Bldg., Indianapolis 4, Ind.
Jessop Steel Co., Lock Box 489, Washington, Pa.
Jessup Signal Gauge Co., 1390 W. Minnehaha Pkwy., Minneapolis 9.
Jet-Heet, Inc., 152 S. Van Brunt St., Englewood, N. J.
Jewel Mfg. Co., 1841 University Av., St. Paul 4, Minn.
Johns-Manville, 22 E. 40th St., New York 16.
Johnson Co., S. T., 940 Arlington Av., Oakland 8, Calif., and 401 N. Broad St., Philadelphia 3, Penn.
Johnson Fan & Blower Corp., 1319 W. Lake St., Chicago 7.
• Johnson Gas Appliance Co., 520 "E" Av., N. W., Cedar Rapids, Iowa.
Johnson Heater Corp., 12 Newhall Av., Saugus, Mass.
Johnson, Inc., William, Brenner & Kent Sts., Newark 3, N. J.
Johnson Ladder & Shoe Co., Eau Claire, Wisconsin.
Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
Johnson Service Co., 507 E. Michigan St., Milwaukee.
Johnston & Chapman Co., 2325 Carroll Ave., Chicago 12.
Johnston Foil Mfg. Co., 6100 S. Broadway, St. Louis 11, Mo.
Johnston Gas Furnace Corporation, Ltd., 11847 Vose St., North Hollywood, Calif.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Joliet Heating Corp., 1408 Herkimer St., Joliet, Ill.
Jones & Laughlin Steel Corp., Third Av. & Ross St., Pittsburgh 30.
Jones Foundry & Machine Co., W. A., 4401 W. Roosevelt Rd., Chicago 24.
Jordan & Co., Inc., Paul R., 311 E. South St., Indianapolis 4.
Josam Manufacturing Co., 1782 E. 11th St., Cleveland 14.
Joy Manufacturing Co., Oliver Bldg., Pittsburgh 22, Penn.
Junior Co., J. C., 444 E. 63rd St., Kansas City, Mo.
Juniper Elbow Co., Inc., 72-15 Metropolitan Av., Middle Village, L. I., N. Y.

K

• Kaiser Aluminum & Chemical Corp., 1924 Broadway, Oakland 12, Calif.
Kalamazoo Stove & Furnace Company, 453 Rochester Av., Kalamazoo 6, Mich.
Kalamazoo Tank & Silo Co., Machine Tool Div., 508 Harrison St., Kalamazoo 16, Mich.
• Kane & Roach, Inc., Niagara & Shonnard Sts., Syracuse 4, N. Y.
Katelman Foundry & Mfg. Co., Third Av. & Eleventh St., Council Bluffs, Iowa.
Kathe Controls, 9711 Euclid Ave., Cleveland 6.
Kauffman Air Conditioning Corp., 4505 Olive St., St. Louis 8.
Kaufman Co., H. J., 13215 Roseland Ave., Detroit 4, Mich.
• Kaustine Company, Inc., 1492 Washington Ave., Perry, N. Y.
Kawneer Co., Niles, Mich.
Keasbey & Mattison Co., Butler Av., Ambler, Pa.
Keasbey Co., Robert A., 139 W. 19th St., New York City 11.
Keckley Company, O. C., 400 W. Madison St., Chicago 6.
Kehm Corporation, 135 S. LaSalle St., Chicago, Ill.
Keith Furnace Co., Dean Av. at E. 26th, Des Moines 17, Ia.
Keller Metals, 821 21st St., Bakersfield, Calif.
Keller Tool Company, P. O. Box 268, Grand Haven, Mich.
Kelsey Heating Co., Inc., 277 James St., Syracuse 2, N. Y.
Kemode Mfg. Co., 3 W. 46th St., New York 11, N. Y.
Ken-Joy Gas Burner Co., 3221 W. National Av., Milwaukee 4.
Kennard Corporation, 1819 S. Hanley Rd., St. Louis 17.
Kennedy, Inc., David E., 58 Second Ave., Brooklyn 15, N. Y.
Kensico Tube Co., Mt. Kisco, N. Y.
• Kent Co., Inc., 435 Canal St., Rome, N. Y.
Kerentoff, G. L., 2218 Reading Road, Cincinnati 3.
Kernchen Co., 333 N. Michigan Av., Chicago 1.
Kerotest Mfg. Co., 2525 Liberty Av., Pittsburgh, 22.
Kester Solder Co., 4201 Wrightwood Av., Chicago 39.
Keystone Asphalt Products Co., 42 E. Ohio St., Chicago 11.
Keystone Flashing Company, 2210 N. 28th St., Philadelphia 32.
Kidder Mfg. Co., Inc., J. P., 426 Colchester Av., Burlington, Vt.
Kilbury Mfg. Co., Inc., 13529 Hawthorne Blvd., Lawndale, Calif.
Kilgore Manufacturing Co., Westerville, Ohio.
Kilham Gas Burner Co., 260 Broadway, Denver 9, Colo..
Kimberly-Clark Corp., Neenah, Wis.
Kindl-Aire Corp., 1480 W. 112th St., Cleveland 2, Ohio
King Metal Co., 414 N. W. Fourth St., Oklahoma City 3, Okla.
King Co., Box 178, Owatonna, Minn.
Kingston Products Corporation, Tipton Div., Tipton, Ind.
• Kirk & Blum Mfg. Co., 2882 Spring Grove Av., Cincinnati 25.
Kirk & Son, Inc., Morris, P., 2717 S. Indiana St., Los Angeles 22.
Kisco Company, Inc., 29th and Choteau, St. Louis 10.
Klauer Mfg. Co., 9th & Washington St., Dubuque, Ia.
Kleenair Furnace Co., 5329 N. E. Sandy Blvd., Portland 13, Ore.
Kleen-Heet, Inc., 1822 Carroll Av., Chicago 12.
Klem Chemicals, Inc., 14401 Lanson Av., Dearborn, Mich.
Klemm Automotive Products Co. 1718 N. Damen Ave, Chicago 47.
Klenk's Aviation Sales, 107 E. 5th St., Wilmington, Del.
Kling Bros. Engineering Works, 1320 N. Kostner Ave., Chicago 51.
Kloppenborg Aluminum Foundry, 211 Marquette St., Davenport, Iowa.
Knickerbocker Co., 603 Liberty St., Jackson, Mich.
• Knights Co., James, Sandwich, Ill.
Knowles Mushroom Ventilator Co., 583 Upper Mountain Ave., Upper Montclair, N. J.
Knu-Vise Incorporated, 2300 Eighth St., Detroit 16.
Koil-Lee Heater Co., Geneva, Ill.
Kol-Master Corp., Oregon, Ill.
KoolVent Aluminum Awning Distributors, Inc., P. O. Box 1855, Pittsburgh 30.
Kopperman & Sons, Joseph, 216 New St., Philadelphia 6.
Koppers Co., Inc., Tar Products Div., Koppers Bldg., Pittsburgh 19.
Korfund Co., Inc., 43-01-A 32nd Pl., Long Island City 1, N. Y.
Kortz Blower Mfg. Co., 117 Michigan St., N. W., Grand Rapids, Mich.
• Ko-Z-Aire, Inc., Red Oak, Iowa.
Kraissl Co., Inc., Terhune & Williams Avs., Hackensack, N. J.
Kramer Bros. Foundry Co., 17 Dell St., Dayton 4, O.
Kramer Trenton Co., N. Olden & Breuning Ave., Trenton 5, N. J.
Krauser-Boyd, Inc., 552 River Road, North Tonawanda, N. Y.
Kresky Mfg. Co., Inc., Second & H Sts., Petaluma, Calif.
Kresno-Stamm Co., 345 Commercial Ave., Palisades Park, N. J.
• Krueger Sentry Garage Company, Green Bay, Wis.
Kwikheat Mfg. Co., 3733 San Fernando Rd., Glendale 4, Calif.

L

Laclede-Christy Clay Products Co., 411 N. Seventh St., St. Louis 1.
Laclede Steel Co., Arcade Bldg., St. Louis 1.
Laco Oil Burner Co., Inc., 233 Union St., Griswold, Ia.
LaCrosse Steel Roofing & Corrugating Co., 327 Jay St., LaCrosse, Wis.
Lake Chemical Co., 3052 W. Carroll Ave., Chicago 12, Ill.
Lakewood Engineering & Mfg. Co., 1766 W. Lake St., Chicago 12.
Lamb Electric Company, 627 Lake St., Kent, Ohio.
Lamb & Ritchie Co., 250 Albany St., Cambridge 39, Mass.
Landis & Gyr, Inc., 104 Fifth Av., New York 11.
• Langsenkamp Co., F. H., 239 E. South St., Indianapolis 25, Ind.
Larkin Colls 519 Memorial Dr., S. E., Atlanta 1, Ga.
Larkin Lectro Products Co., 160 W. 146th St., New York 30.
LaSalle Oil Burner Co., 421 Westlake N., Seattle, Wash.
Lasko Metal Products, Inc., 433 W. Gay St., West Chester, Pa.
Lastik Products Co., Inc., 1106 Keenan Bldg., Pittsburgh 22, Penn.
• Lau Blower Co., 2005 Home Av., Dayton 7, O.
Lawson Manufacturing Co., 300 N. Lexington Av., Pittsburgh, 8.
Leas Co., H. Leslie, Monona, Ia.
Ledcote Products Co., 35-01 Vernon Blvd., Long Island City 1, N. Y.
Lee Co., K. O., Congress at 1st, Aberdeen, S. D.
Lee Engineering Company, 95 River St., Hoboken, N. J.
Lee & Son Co., Thomas, 123-125 W. Second St., Cincinnati 2.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44.
Lesson Air Conditioning Corporation, 14631 Meyers Rd., Detroit 27.
Lehigh Fan & Blower Co., Front & Linden Sts., Allentown, Pa.
Lehigh Mfg. Co., P. O. Box 1418, Lancaster, Pa.
Lehon Company, 4625 S. Oakley Av., Chicago 9.
Leisurehouse, Inc., 116 N. Lorraine, Wichita, Kans.
Lenk Mfg. Co., 36-38 Cummington St., Boston 15.
Leland Electric Co., Inc., 1501 Webster St., Dayton 4, O.
Lennox Furnace Co., 200 S. 12th Av., Marshalltown, Iowa; 1705 Olentangy River Rd., Columbus, Ohio; 400 N. Midler Av., Syracuse, N. Y.
Leslie Manufacturing Co., P. O. Box 7042, Dallas, Tex.
Leslie Welding Company, 2943 Carroll Ave., Chicago 12.
• Levow, David, 305 W. 20th St., New York City 11.
Lewellen Mfg. Co., Columbus, Ind.
Lewin-Mathes Company, Lewin Metals Div., 13th & Chateau Sts., St. Louis 3.
LeWinter Appliance Co., 2301 E. 7th St., Los Angeles 33, Calif.
Lewis Laboratories, Inc., Paul, 4253 N. Port Washington Rd., Milwaukee 12.
Lexington Supply Co., 4815 Lexington Ave., Cleveland 3, Ohio.
L'Hommedieu & Sons Co., Chas. F., 4521 Ogden Av., Chicago 23, Ill.
Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.
Libert Machine Co., 324 N. Roosevelt St., Green Bay, Wis.
Lients Co., B. P., 210 W. 8th St., Kansas City, Mo.
Lignum-Vitae Products Corp., 36 Boyd Av., Jersey City, N. J.
• Lima Register Co., 651 N. Baxter St., Lima, Ohio.
Lincoln Electric Co., 12818 Coit Rd., Cleveland 1.
Lincoln Machine Co., Livermore Falls, Me.
Linde Air Products Co., 30 E. 42nd St., New York City 17.
Lindsay Structure, Inc., 5000 W. Dempster St., Skokie, Ill.
Link-Belt Co., 2410 W. 18th St., Chicago 8.
Liquidometer Corp., Skillman Av., 36th and 37th Sts., Long Island City 1, N. Y.
Lisbon Hoist and Crane Company, Div. Wright File Co., Lisbon, Ohio.
Litman, Morris, 89 Cliftwood St., Springfield, Mass.
Little Burner Co., Inc., H. C., 2nd & Lincoln, San Rafael, Calif.
Littleford Bros., Inc., 453 E. Pearl St., Cincinnati 2.
• Little Giant Vaporizer Co., 5101 Classen Blvd., Oklahoma City 6.
Little Janitor Furnace Clock Co., 631 Broadway, New York City.
• Livingston, Inc., Kalamazoo Av., Marshall, Mich.
Locke Stove Co., 114 W. 11th St., Kansas City 6, Mo.
• Lockformer Co., 4615 Roosevelt Rd., Chicago 50, Ill.
Lonergan Manufacturing Co., 704 Plastic Road, Albion, Mich.
Lord Mfg. Co., Erie, Pa.
Los Angeles Gas Appliance Co., Inc., 8816 Medford St., Los Angeles 33.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Los Angeles Sheet Metal Manufacturing Co., Inc., 901 E. Ninth St., Los Angeles 21.
Louden Machinery Company, Fairfield, Iowa.
Lovejoy Flexible Coupling Co., 5016 Lake St., Chicago 44, Ill.
Lovekin Water Heater Co., 21-43 Laurel St., Philadelphia 23.
Lucas & Company, Inc., John, 323 Race St., Philadelphia.
Ludowici-Celadon Co., 104 S. Michigan Ave., Chicago 3.
Lufkin Rule Co., Saginaw, Mich.
Lukens Metal Co., Thos. F., Hedley & Bath Sts., Philadelphia 27.
Lukens Steel Co., 308 S. First Ave., Coatesville, Pa.
Lumm Co., A. H., 2912 Albion St., Toledo 6, O.
Lundt, Inc., Ernest C., Route 6, P. O. Box 216, Little Falls, N. J.
Lundy Manufacturing Corp., 27-27 Jackson Ave., Long Island City 1, N. Y.
Luty Furnace Mfg. Co., 8747 Lyndon Ave., Detroit 21, Mich.
Luxra Co., P. O. Box 315, Atchison, Kans.
Lymas Co., H. B., Southampton, Hampshire Co., Mass.
Lynch Corp., 3600 Summit St., Toledo 1, Ohio.
Lyon, Conklin & Co., Inc., Race & McComas St., Baltimore 30.
Lyon Metal Products, Inc., P. O. Box 671, Aurora, Ill.

M

MB Manufacturing Co., Inc., 1040 State St., New Haven 11, Conn.
M & K Water Heater Co., 9031 W. Washington Blvd., Culver City, Calif.
McCollum Hoist & Mfg. Co., 721 Rogers St., Downers Grove, Ill.
McCord Corporation, 2587 E. Grand Blvd., Detroit 11.
McCorkle Co., D. H., Sixth & Bancroft Way, Berkeley 2, Calif.
McCulloch Motors Corp., 6101 Century Blvd., Los Angeles 40.
McDaniel Mfg. Co., Inc., 1012 Powhattan St., Dallas 2, Texas.
McDonald Mfg. Co., A. Y., 12th & Pine Sts., Dubuque, Ia.
McDonnell & Miller, Inc., 400 N. Michigan Ave., Chicago 11.
McGraw Electric Co., 5301 W. 65th St., Chicago 38.
McKay Co., 1005 Liberty Ave., Pittsburgh 22.
McKee Air Conditioning Company, 3361 Freemont Av., N., Minneapolis 12.
• McLarty Systems, 2600 Dickman, Battle Creek, Mich.
McLeod & Henry Co., Inc., 395A First St., Troy, N. Y.
McPherson Furnace & Supply Co., 1305 N. E. 2nd Av., Portland 12, Ore.
McQuay, Inc., 1600 Broadway, N. E., Minneapolis 13.
Machine Rebuilding Co., 2738 Chene St., Detroit 7, Mich.
Machinery Liquidating Co., 2310 W. Warren Ave., Detroit 8, Mich.
• Made-Rite Co., Inc., 10th & Monroe St., Newport, Ky.
MaGirl Foundry & Furnace Co., 413 E. Oakland Ave., Bloomington, Ill.
Mahl Mfg. Co., 3031 Slauson Ave., Huntington Park, Calif.
• Maid-O'-Mist, Inc., 3217 N. Pulaski Rd., Chicago 41, Ill.
• Majestic Co., 722 Erie St., Huntington, Ind.
Majestic Flashing Company, Reisterstown Rd. at Elgin Av., Baltimore 17.
Mall Tool Company, 7740 South Chicago Av., Chicago 19.
Malleable Iron Fittings Co., Lock Box 231, Branford, Conn.
Mallory & Company, Incorporated, P. R., Ray F. Storrow Bldg., Indianapolis, Ind.
Manhattan Perforated Metal Co., Inc., 42-17 37th St., Long Island City 1, N. Y.
Manheim Manufacturing and Belting Co., Manheim, Pa.
Manning, Maxwell & Moore, Inc., 11 Elias St., Bridgeport 2, Conn.
Manufacturer's Fin Coil Co., 2505 S. Pulaski Rd., Chicago 23.
Maple City Furnace Co., 605 S. Main St., Monmouth, Ill.
• Maplewood Machinery Co., 3634 Fullerton Ave., Chicago 47.
Marathon Electric Mfg. Corp., Cherry & Randolph Sts., Wausau, Wis.
Marble-Card Electric Co., Gladstone, Mich.
Marine Electrolysis Eliminator Co., 617 Dearborn St., Seattle.
Marley Co., Inc., Fairfax & Marley Rds., Kansas City 15, Kan.
Marlo Coil Company, 6135 Manchester Av., St. Louis 10.
Marquette Mfg. Co., Inc., 307 E. Hennepin Ave., Minneapolis 14, Minn.
Marsh Heating Equipment Co., Skokie, Ill.
Marsh Instrument Co., Skokie, Ill.
Marsh Lumber Co., Inc., 535-611 Tuscarawas Ave., Dover, O.
Marshall Furnace Co., Dobbins & Hanovers Sts., Marshall, Mich.
• Marshalltown Mfg. Co., 901 E. Nevada St., Marshalltown, Ia.
Martens & Stormoen Co., 15 Hathaway St., Boston 10.
Martin Fan & Blower Co., 4634 W. 21st Place, Chicago 50.
Martin Co., Inc., J. O., 647 Minna St., San Francisco 3.
Martin Stamping & Stove Co., Huntsville, Ala.
Martocello & Co., Jos. A., 229 N. 13th St., Philadelphia 7.
Mason Machine Company, Inc., 317 E. King St., York, Pa.
Masonite Corp., 111 W. Washington St., Chicago 2.
Master Electric Co., 126 Davis Av., Dayton 1, O.
• Master Products Co., Inc., 7000 S. Wentworth Av., Chicago 21.
Matt Coil-Less Burner Co., 4015 W. Lake St., Chicago 24.
Matthiessen & Hegeler Zinc Co., LaSalle, Ill.
Mauer Engineering, 2525 Colfax St., Evanston, Ill.
Maurey Mfg. Corp., 2915 S. Wabash Av., Chicago 16.
Maxant Button & Supply Co., 117 S. Morgan St., Chicago 7.
Maxwell-Heatwell Co., 1432 S. Logan St., Denver 10, Colo.
• May-Fiebeger Co., S. 21st St., Newark, O.
• MayFlower Air Conditioners, Inc., Duluth Av. & E. Seventh St., St. Paul 6.
Mayne Products Co., 324 Harries Bldg., Dayton 2, O.
May Oil Burner Div., Gerotor May Corp., Maryland Av. & Oliver St., Baltimore 3, Md.
Maysteel Products, Inc., 740 N. Plankinton Ave., Milwaukee 3, Wis.
Maze Co., W. H., Peru, Ill.
Mechanical Products Co., 1723 First Ave., S. Seattle 4, Wash.
• Mehl Machinery, 1101 Austin St., Houston 1, Texas.
Meier Electric & Machine Co., Inc., 3525 E. Washington St., Indianapolis 7.
Mel-Gauge Co., P. O. Box 17, Station A, New Haven, Conn.
Mellish & Murray Co., 1715 Carroll Av., Chicago 12.
• Merchandising and Manufacturing Associates, Inc., Wabank Rd., Box 411, Lancaster, Penn.
• Mercoid Corp., 4201 Belmont Av., Chicago 41.
Meriam Instrument Co., 10920 Madison Av., Cleveland 2.
Merit Water Heater Co., 132 E. Palmer St., Compton, Calif.
Messer Co., J. H., 7040 Bennett St., Pittsburgh 8, Pa.
Met Sales Co., 1217 N. Main St., Rockford, Ill.
Metal & Thermit Corp., 120 Broadway, New York City 5.
Metalweld, Inc., 26th & Hunting Park Ave., Philadelphia 29, Penn.
Metromatic Mfg. Co., 21 Henderson St., Everett 49, Mass.
Metropolitan Refining Co., Inc., 50-23 23rd St., Long Island City 1, N. Y.
Metzner Stove Repair Co., 515 Wyandotte, Kansas City 6, Mo.
• Meyer & Bro. Co., F., 208 S. Commercial St., Peoria, Ill.
• Meyer Furnace Co., 1200 S. Washington St., Peoria 1, Ill.
Meyer Mfg. Co., 2536 Fourteenth St., Detroit 16.
• Meyer Sheet Metal Machinery Co., 1928-30 Santa Fe Ave., Los Angeles 21, Calif.
Michigan Steel Tube Products Co., Holbrook & Buffalo Ave., Detroit 12.
Michigan Tank & Furnace Corp., 14247 Tireman Ave., Dearborn, Mich.
Micro Products Co., 29 N. Wacker Dr., Chicago 6.
Midco Register Corporation, 1059 Grand Av., St. Paul 5.
Mid-Continent Metal Products Co., 1960 Clybourn Av., Chicago 14.
Midland Paint & Varnish Co., 9115 Reno Av., Cleveland 5.
Mid-States Welder Mfg. Co., 6025 S. Ashland Ave., Chicago 36, Ill.
Midwest Automatic Control Co., 510 Third St., Des Moines 9, Iowa.
Midwest Heater Co., 1114 Howard St., Omaha 8, Nebr.
Miller Company, Heating Products Div., Meriden, Conn.
• Miller & Doing, 65 York St., Brooklyn 1.
Miller Electric Mfg. Co., Inc., 718 S. Bounds St., Appleton, Wis.
Miller Floor Furnace Co., 741 E. 14th St., Oakland, Calif.
Miller-Harris Instrument Co., 324 N. 4th St., Milwaukee 3, Wis.
Miller-Special Gas Heating Co., Div. Keene Electrical Machinery Co., 549 W. Washington Blvd., Chicago 6.
Millers Falls Co., 57 Wells St., Greenfield, Mass.
Mills Novelty Co., 4110 W. Fullerton Av., Chicago.
• Milton Equipment Co., 402 Race St., Philadelphia 6.
Milwaukee Brush Mfg. Co., 2236 N. 30th St., Milwaukee.
Milwaukee Gas Specialty Company, P. O. Box 461, Milwaukee 1.
• Minneapolis-Honeywell Regulator Co., 2726 Fourth Av. S., Minneapolis 8.
Minnesota Mining & Manufacturing Co., 900 Fauquier Av., St. Paul 6.
Minn-Kota Foundry & Mfg. Co., P. O. Box 822 Fargo, N. D.
Minster Machine Co., 270 W. 5th St., Minster, Ohio.
Misener Mfg. Co., Inc., 202-8 Walton St., Syracuse 2, N. Y.
Mission Appliance Corp., 7101 McKinley Av., Los Angeles 1.
Mitchell & Co., Inc., W. K., 29th & Ellsworth, Philadelphia 46.
Mitchell Company, Incorporated, John E., 3800 Commerce St., Dallas 1, Tex.
Modern Controls Corporation, 7626 Kercheval Av., Detroit 14.
Modern Die & Machine Co., 166 Pleasant St., Boston, Mass.
Modern Engineering Co., 3411 Pine Blvd., St. Louis 3.
Modern Materials Co., 120 W. Adams St., Chicago 3, Ill.
Modine Mfg. Co., 1500 DeKoven Ave., Racine, Wis.
Moeller Instrument Co., 132nd St. & 89th Av., Richmond Hill 18, N. Y.
Moeschl-Edwards Corrugating Co., Inc., P. O. Box 1115, Cincinnati.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Molloy Sales Corp., 2445 N. Western Ave., Chicago, Ill.
Monad Products Co., 6550 Hartwell, Dearborn, Mich.
Monarch Alloys, 503 N. Chestnut St., Ravenna, Ohio.
Monarch Heating Co., 4661 Alger St., Los Angeles 26.
Monarch Mfg. Works, Inc., 2501 E. Ontario St., Philadelphia 34.
Moncrief Furnace Co., P. O. Box 1673, Atlanta 1, Ga.
Moncrief Furnace & Mfg Co., Inc., 3903 Main St., Dallas 1, Tex.
Monitor Controller Co., 51-55 Hayward St., Boston 34, Mass.

• Advertisement in this issue. See Index to Advertisers, page 93-D.

• Monogram Products Co., 731 N. 25th St., Philadelphia 4.
Montag Stove & Furnace Works, 2011 N. Columbia Blvd. Portland 2, Ore.
Montgomery Brothers, 1122 Howard St., San Francisco 3.
Moore Company, 806 E. Missouri Ave., Marceline, Mo.
Moore Division, Conlon-Moore Corporation, 105 E. Benton St., Joliet, Ill.
Moore Equipment Company, 3827 S. 52nd St., Lincoln 6, Nebr.
Mor Flo Heater Corp., 2176 E. 74th St., Cleveland 3, Ohio.
Morey, Dan, 814-816 S. Robertson Blvd., Los Angeles 35, Calif.
Morf Industries, Inc., 790 Manor Rd., Staten Island 2, N. Y.
• Morrison Products, Inc., 16816 Waterloo Rd., Cleveland 10.
Morrison Railway Supply Corp., 814 Rand Bldg., Buffalo 3, N. Y.
• Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N.Y.
Morse-Smith-Morse, Inc., 165 Dexter Ave., Watertown 72, Mass.
Mortell Co., J. W., Hobbie Av. & Big Four R.R., Kankakee, Ill.
Moser & Son Manufacturing Co., 227 E. Washington St., Bluffton, Ind.
Mountain States Equipment Co., 1238 Speer Blvd., Denver 4, Colo.
Mt. Hawley Mfg. Co., Mt. Hawley Airport, Peoria 4, Ill.
• Mt. Vernon Furnace & Mfg. Co., P. O. Box 213 Mt. Vernon, Ill.
Muckle Mfg. Co., Owatonna, Minn.
Mueller Brass Co., 1925 Lapeer Av., Port Huron, Mich.
Mueller Co., 512 W. Cerro Gordo St., Decatur, Ill.
• Mueller Furnace Co., L. J., 2005 W. Oklahoma Av., Milwaukee 15, Wis.
Mulkey Co., J. F., W. 8 Mile & Telegraph Rds., Detroit 19, Mich.
Multi-Therm Mfg. Co., Inc., 11637 Linwood, Detroit, 6.
Muncie Burner Mfg. Co., 27292 Eureka Rd., Romulus, Mich.
Muncie Gear Works, Inc., 700 N. Wysor, Muncie, Ind.
Mundet Cork Corp., 7101 Tonnelle Ave., North Bergen, N. J.
Mundt & Sons, Charles, 53 Fairmont Av., Jersey City 4, N. J.
Munn and Steel, Inc., 120 Lister Av., Newark 5, N. J.
Munton Manufacturing Company, 9400 Belmont Av., Franklin Park, Ill.
Murray Co. of Texas, Inc., 2200 Canton St., Dallas 1, Texas.
Murray Manufacturing Co., D. J., 1002-24 Third St., Wausau, Wis.
Mustee Heater Co., 3409 Superior Av., Cleveland 14.
Mutual Liquid Gas & Equipment Co., 3606 W. Imperial Highway, Inglewood, Calif.
Myers & Bro. Co., F. E., Ashland, Ohio.
Myers Electric Co., Inc., 209 First Av., Pittsburgh 22, Pa.

N

Nat Corporation, 2710 McGee Trafficway, Kansas City 5, Mo.
National Air Conditioning Inc., 321 Central Ave., Johnstown, Penn.
National Airoil Burner Co., Inc., 1284 E. Sedgley Av., Philadelphia 34.
National Appliance Company, 4814 W. Vernor Highway, Detroit 9.
National Appliances, Inc., 269 Shady Av., Pittsburgh, Pa.
National Burner & Mfg. Co., 19619 Oakland Av., Detroit.
National Carbon Company, Inc., 30 E. 42nd St., New York 17.
National Cylinder Gas Co., 840 N. Michigan Av., Chicago 11.
National Electric Welding Machines Co., 1846 N. Trumbull St., Bay City, Mich.
• National Engineering & Manufacturing Co., 519 Wyandotte, Kansas City 6, Mo.
National Engineering Products, Inc., Commerce & Savings Bldg., Washington, D. C.
National Foundry & Furnace Co., Station "B," Dayton 7, O.
National Gas Equipment Co., Inc., P. O. Box 443, Terrell, Tex.
National Gypsum Co., 325 Delaware Av., Buffalo 2.
• National Heater Company 2182 Cleora Av., St. Paul 4.
National Lead Co., 111 Broadway, New York City 6.
• National Lock Co., Inc., 1902 Seventh St., Rockford, Ill.
National Machine Tool Co., 1536 Clark St., Racine, Wis.
National Mfg. Corp., 151 Fillmore Av., Tonawanda, N. Y.
• National Metal Fabricators, 2136 S. Sawyer Av., Chicago 23.
National Oil Burner Company, 614 Bergen St., Brooklyn 17.
National Pipe Bending Co., 123 River St., New Haven 13, Conn.
National Screw & Mfg. Co., Chester Hoist Div., Lisbon, Ohio.
National Sheet Metal Co., 1617 Water St., Peru, Ill.
National Steam Pump Co., 701 W. Johnson St., Upper Sandusky, O.
National Stoker Company, Inc., 2820 Locust St., St. Louis 3.
• National Super Service Co., Inc., 1944 N. 13th St., Toledo 2, O.
National Tube Company, Frick Building, Pittsburgh 30, Pa.
Nebel Manufacturing Co., P. O. Box 3942, Shaker Sq. Station, Cleveland 20.
Neilson Chemical Co., 6564 Benson St., Detroit 7.
Nelpin Manufacturing Company, 45-17 Davis St., Long Island City 1, N. Y.
Nelson Bros. & Strom Company, 1630 Racine St., Racine, Wis.
Nelson Corporation, Herman, 1824 Third Av., Moline, Ill.
Nelson Specialty Welding Equipment Corp., Dept. 5, 440 Peralta Av., San Leandro, Calif.
Nesbitt, Inc., John J., State Rd. & Rhawn St., Philadelphia 35.
Nevinger Manufacturing Co., Inc., Greenville, Ill.
New Albany Machine Mfg. Co., E. 10th & Water Sts., New Albany, Ind.
Newark Ladder & Bracket Co., Inc., Walnut & Central Ave., Clark (Rahway), N. J.
Newark Transformer Company, Linden & Park Aves., Linden, N. J.
Newcomb Detroit Co., 5741 Russell St., Detroit 11, Mich.
New Delphos Mfg. Co., 102 S. Pierce St., Delphos, O.
New England Carbide Tool Company, 60 Brookline St., Cambridge 39, Mass.
New Holland Metals Co., Leola, Pa.
Newell & Sons, Irwin, Pa.
New Jersey Zinc Co., 160 Front St., New York City 7.
New Monarch Machine & Stamping Co., 406 S. W. 9th St. Des Moines 3, Ia.
New Plastic Corporation, 1017 N. Sycamore, Hollywood 38, Calif.
Newport Rolling Mill Co., Div. Andrews Steel Co., 9th & Lowell Sts., Newport, Ky.
New York Blower Co., 3155 Shields Av., Chicago 16.
Niagara Blower Co., 405 Lexington Ave., New York City 17.
• Niagara Machine & Tool Works, 637-697 Northland Av., Buffalo 11.
Niagara Motors Corporation, Dunkirk, N. Y.
Niles Rolling Mill Co., Niles, O.
No-No Specialty Co., Quincy Av. at 69th St., Cleveland 4.
• Norge Heat Div., Borg-Warner Corp., 672 E. Woodbridge St., Detroit 26, Mich.
Norgren Co., C. A., 222 Santa Fe Dr., Denver 9, Colo.
Nork Products Co., 5897 S. Main St., Los Angeles 3.
Norma-Hoffman Bearings Corp., Stamford, Conn.
Norman Products Company, Inc., 1150 Chesapeake Av., Columbus 12, Ohio.
Norristown Magnesia & Asbestos Co., Washington St. below Ford St., Norristown, Pa.
North American Fibre Products Co., Standard Building, Cleveland 13.
North Bangor Slate Co., Bangor, Pa.
Northern Blower Co., 6409 Barberton Av., Cleveland 2.
Northern Indiana Brass Co., 325 Plum St., Elkhart, Ind.
Northern Steel & Stoker Corp., 3100 Prospect Rd., Peoria 4, Ill.
Northwest Foundry & Furnace Co., 2345 S. E. Gladstone St., Portland 2, Ore.
Northwest Heating, Inc., 1944 N. Lombard, Portland 3, Oreg.
Northwest Lead Company, 2700 16th Av., S. W., Seattle 4, Wash.
Northwest Metal Products, Inc., 55 Spokane St., Seattle 4, Wash.
• Northwestern Stove Repair Co., 662 W. Roosevelt Rd., Chicago 7.
Nortmann-Duffke Co., 2740 S. 32nd St., Milwaukee 7.
• Norwalk Air Conditioning Corp., 138 Water St., South Norwalk, Conn.
Norwood Filtration Co., 350 Dwight St., Holyoke, Mass.
Nugent Furnaces, Thos., 223 E. 80th St., New York 21.
NuSteel Company, 1714 S. Ashland Av., Chicago 8.
• Nu-Way Corp., 2416 Fourth St., Rock Island, Ill.

O

Oakite Products, Inc., 22 Thames St., New York 6.
Oakland Foundry Co., Florida and A Sts., Belleville, Ill.
• Obdyke, Inc., Benjamin F., 447 N. Eighth St., Philadelphia 23.
O'Brien Corporation, 101 N. Johnson St., South Bend 21, Ind.
Ohio Electric Mfg. Co., 5910 Maurice Ave., Cleveland 4.
Ohio Foundry & Mfg. Co., Penn R. R. & Black St., Steubenville, Ohio.
Ohio Paper Co., Miamisburg, Ohio.
Ohio Products Co., 16113 Munn Road, Cleveland 11.
Ohio Stove Company, Box 1256 Portsmouth, Ohio.
• Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., 200 Fourth Ave., Evansville 2, Ind.
Ohio Wire Products Co., 217 N. Tuscarawas Av., Dover, Ohio.
Ohmlac Paint & Refining Co., 6550 S. Central Av., Chicago 38.
Oil Equipment Laboratories, Inc., 456 Bridge St., Elizabeth, N. J.
Oil Equipment Mfg. Corp., 75 Brewster St., New Haven 6, Conn.
O'Keefe & Merritt Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
Olmstead & Co., Chas. M., 14926 Mack Av., Detroit 24.
• Olsen Manufacturing Co., The C. A., Filbert St., Elyria, O.
• Olson & Co., Arthur A., Broad and Court Sts., Canfield, Ohio.
• Omaha Stove Repair Works, 1206 Douglas St., Omaha 2, Nebr.
• O'Neil-Irwin Manufacturing Co., 800 Jefferson Ave., Lake City, Minn.

• Advertisement in this issue. See Index to Advertisers, page 95-D.

• Oran Company, 2232 S. Third St., Columbus 7, Ohio.
Original Metal Forming Machine Co., P. O. Box 314, Seattle 11, Wash.
Ormsby-Osterman Company, 3631 Cass Av., St. Louis 12.
Osborn Mfg. Co., 5401 Hamilton Av., Cleveland 14.
Overly Manufacturing Co., Washington Av., Greensburg, Pa.
• Owens-Corning Fiberglas Corp., 1930 Nicholas Bldg., Toledo 1, O.

P

Pacific Coast Heater Corp., 230 S. Del Mar Av., San Gabriel, Calif.
Pacific Gas Heating Co., 2948 Twentieth St., San Francisco 18.
Pacific Industrial Mfg. Co., 848 49th Ave., Oakland 1, Calif.
Pacific Lumber Co., 100 Bush St., San Francisco 4.
Pacific Manufacturing Corporation, 7500 Stanton Ave., Cleveland 4, Ohio.
Packaged Oil Burner Mfg. Co., Inc., 1757 N. Park Av., Chicago 14.
Packard Electric Div., General Motors Corp., Warren, Ohio.
Packham Crimper Co., Oak St. & N. Y. C. Depot, Mechanicsburgh, Ohio.
Packless Metal Products Corp., 81 Winthrop Av., New Rochelle, N. Y.
Page Steel & Wire Div. of American Chain & Cable Co., Inc., Monessen, Pa.
Paine Company, 2951 W. Carroll Av., Chicago 12.
Paine Fireworks Display Co., Inc., 350 5th Ave., New York 1, N. Y.
• Palmer Manufacturing Corp., 705 W. Jefferson St., Phoenix, Ariz.
Palmer Thermometers, Inc., 2501 Norwood Av., Norwood, Cincinnati 13.
Palo-Myers, Inc., 61-63 Reade St., New York 7, N. Y.
Pangborn Corp., Pangborn Blvd., Hagerstown, Md.
Paraffine Companies, Inc., 475 Brannan St., San Francisco 19.
Paragon Electric Co., 1600 Twelfth St., Two Rivers, Wis.
Paragon Oil Burner Corp., 75 Bridgewater St., Brooklyn 33, N. Y.
Paramount Supply Co., 2737 N. 48th St., Lincoln 4, Nebr.
Park City Cornice Works, Inc., 729 Union Av., Bridgeport 7, Conn.
Parker Appliance Co., 17325 Euclid Av., Cleveland 12.
• Parker-Kalon Corp., 190-192 Varick St., New York 14.
Parker Rust-Proof Co., 2177 E. Milwaukee Av., Detroit 11.
Patent Novelty Company, Fulton, Ill.
Paterson, Stanley C., 789 Tremont St., Boston 18.
Patrol Valve Co., 3310 Superior Ave., N. E., Cleveland 14.
• Patten Co., J. V., 500 DeKalb Av., Sycamore, Ill.
Patterson-Kelley Co., Inc., East Stroudsburg, Pa.
Patterson-Sargent Co., St. Clair, & 38th St., Cleveland 14.
Payne Furnace Div., Affiliated Gas Equipment, Inc., 801 Royal Oak Ave., Monrovia, Calif.
Peacard Co., M. A., 3036 Washington St., Roxbury Sta., Boston 19.
• Peck, Stow & Wilcox Co., Center St., Southington, Conn.
Pecora Paint Co., 4th St. & Erie Av., Philadelphia 40.
Pedrick Tool & Machine Co., 3640 N. Lawrence St., Philadelphia 40.
Peer, Inc., 1440 Milton St., Benton Harbor, Mich.
Peerless Electric Co., 1401 W. Market St., Warren, Ohio.
• Peerless Foundry Co., 1853 Ludlow Av., Indianapolis 7, Ind.
Peerless of America, Inc., 2901 Lawrence Av., Chicago 25.
Peerless Oil Burner Co., Inc., 3519 Bellefontaine Av., Kansas City 3, Mo.
Peerless Sales and Supply, 4318 Sheridan Blvd., Lincoln 6, Nebr.
Peninsular Stove Co., 2699 Gratiot Av., Detroit.
Penn Boiler & Burner Mfg. Corp., Fruitville Rd., Lancaster, Pa.
Penn Brass & Copper Co., Erie, Penn.
• Penn Electric Switch Co., Goshen, Ind.
Penn Metal Co., Inc., 205 E. 42nd St., New York 17, N. Y.
Penn Supply & Metal Corporation, 1831 N. Fifth St., Philadelphia 22.
Penn Tool Company, 124 E. Cumberland St., Philadelphia 25.
Penn Ventilating Co., Goodman above Allegheny Av., Philadelphia 40.
Pennsylvania Flexible Metallic Tubing Co., 72nd St. & Powers Lane, Philadelphia 42, Penn.
Pennsylvania Furnace & Iron Co., P. O. Box 269, Warren, Pa.
Pennsylvania Range Boiler Co., 24th St. & Washington Av., Philadelphia 46.
Pennsylvania Refining Co., Ohio Div., 2636 Lisbon Rd., Cleveland 4, Ohio.
Pennsylvania Salt Mfg. Co., 1000 Widener Bldg., Philadelphia 7.
Pennsylvania Wire Glass Co., 1612 Market St., Philadelphia 3.
Perfection Stove Co., 7609 Platt Av., Cleveland 4, Ohio.
Perfection Water Heater Co., 5426 N. San Fernando Rd., Glendale 3, Calif.
• Perfex Corp., 500 W. Oklahoma Av., Milwaukee 7.
Perkinson & Brown, 412 N. Wolcott Av., Chicago 12.
Permutit Company, 330 W. 42nd St., New York 18.
Pernot Corp., P. O. Box 363, Norwalk, Calif.
Perry Graf Co., Maywood, Ill.
Persson and Kellison, 4415 Airport Way, Seattle 8, Wash.
Peters-Dalton, Inc., 17900 Ryan Road, Detroit 12.
• Petersen Mfg. Co., Inc., DeWitt, Nebr.
Peterson Co., B. A., 300 W. Railroad, Dowagiac, Mich.
• Petroleum Heat & Power Co., Stamford, Conn.
Petroleum Solvents Corporation, 331 Madison Av., New York 17, N. Y.
Petrometer Corp., 1 Star Sq., Long Island City 1, N. Y.
Pfanstiehl Chemical Co., 104 Lakeview Av., Waukegan, Ill.
Pfening Co., Fred D., 1075 W. 4th Av., Columbus 12, O.
Phelps Dodge Copper Products Corp., British American Tube Div., 40 Wall St., New York City 5.
Phelps Mfg. Co., 801 Thomas St., Little Rock, Ark.
Pheoll Manufacturing Co., 5700 Roosevelt Rd., Chicago 50.
Philadelphia Chain Block & Mfg. Co., Inc., Hancock & Norris Sts., Philadelphia.
Philadelphia Gear Works, Inc., Erie Av. and G St., Philadelphia 34.
• Philadelphia Rust Proof Co., 3324 Frankford Ave., Philadelphia, Penn.
Philadelphia Thermometer Co., 6th & Cayuga Sts., Philadelphia 40.
Philadelphia Tramrail Co., 3456 N. Weikel St., Philadelphia 34.
Phillips Cooling Tower Co., Inc., 114 Liberty St., New York City 6.
Phillips Drill Co., 4700 Fifth Av., Chicago 44.
Phillips & Buttorff Mfg. Co., 217 Third Av., N., Nashville, Tenn.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Pioneer Gen-E-Motor, 5841 W. Dickens, Chicago.
• Pioneer Tool Company, 1103 Wisconsin Av., Racine, Wis.
Pioneer Water Heater Corp., 5131 San Fernando Rd., Los Angeles 41.
Piqua Machine & Mfg. Co., Young & College St., Piqua, Ohio.
Pittsburgh Corning Corporation, 307 Fourth Ave., Pittsburgh 22, Penn.
Pittsburgh Equitable Meter Div., Rockwell Manufacturing Company, 400 N. Lexington Av., Pittsburgh 8.
Pittsburgh Furnace Parts Co., 109 Federal St., Pittsburgh.
Pittsburgh Lectrodryer Corp., P. O. Box 1766, Pittsburgh 30.
Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22.
Pittsburg Water Heater Company, P. O. Box 4452, Pittsburgh 5, Penn.
Pittston Stove Co., P. O. Box 279, Pittston, Pa.
Plant Rubber & Asbestos Works, Inc., 537 Brannan St., San Francisco 7.
Plasteel Products Co., McAdam Ave., Washington, Pa.
Plastergon Wall Board Co., Philadelphia Av., Buffalo 7.
Plastic Products Co., 6475 Georgia Av., Detroit 11.
Pleasantaire Corp., 730 Tower Bldg., Washington 5, D. C.
Plummer Spray Equipment Co., 700 Filmore St., Napoleon, O.
Plymouth Industries, Inc., 1932 Harrison Av., Plymouth, Ind.
Pocahontas Fuel Company Incorporated, Stoker Div., 340 E. 131st., Cleveland 8.
Polaire Cooler Co., 141 E. Jackson St., Phoenix, Ariz.
Polo Pump Co., Polo, Ill.
Portable Electric Tools, Inc., 320 W. 83rd St., Chicago 20, Ill.
Portland Stove Fdry. Co., 57 Kennebec St., Portland 2, Me.
Potomac Mfg. Co., 318 S. 10th St., Philadelphia 7.
Potts-Farrington Co., 4250 Wissahickon Ave., Philadelphia 29, Penn.
Powder Power Tool Corp., 6719 S W. Woods St., Portland 1, Oreg.
Powers Regulator Co., 2720 Greenview Av., Chicago 14.
Prat-Daniel Corporation, East Port Chester, Conn.
Precision Thermometer & Instrument Co., 1452 Brandywine St., Philadelphia 30.
Precision Welder & Machine Co., 138 E. McMicken Av., Cincinnati 10.
Preferred Utilities Manufacturing Corp., 1860 Broadway, New York City 23.
Premier Burner Co., 3816 Harkness Rd., Cleveland 6, Ohio.
• Premier Furnace Co., Lock Box 150, Dowagiac, Mich.
Premier Metal Etching Co., 21-03 44th Av., Long Island City 1, N. Y.
Premier Stove Co., Belleville, Ill.
Premium Coal & Oil Co., 5530 Carthage Ave., Cincinnati 12, Ohio.
Prestite Engineering Co., 3900 Chouteau St., St. Louis 10.
Progressive Welder Company, 3050 E. Outer Drive, Detroit 12.
Proie & Coogan Heating Co., 6117 Broad St., Pittsburgh 6.
Protected Steel Products, McAdam Av., Washington, Pa.
Protective Coatings, Incorporated, P. O. Box 3955, Strathmoor Station, Detroit 27.
Pryne & Co., Inc., 140 N. Towne Ave., Pomona, Calif.
Puhl & Hepper Mfg. Co., Inc., 6400 W. Florissant Av., St. Louis 20.
Pullen Stove & Furnace Repair Co., Geo. A., 1333 Lawrence St., Denver 2, Colo.
Pyle-National Company, Multi-Vent Div., 1367 W. 37th St., Chicago 9.
Pyott Foundry & Machine Co., 325 N. Sangamon St., Chicago 7, Ill.
Pyramid Mouldings, Inc., 5353 W. Armstrong Av., Chicago 30.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Pyrolite Products Co., 1231-31 W. 74th St., Cleveland 2.
Pyro-Jet Division, Riverside Steel Co., Wheeling W. Va.

Q

Quad Stove Co., 72 East First St., Columbus, Ohio.
Quaker Mfg. Co., 222 W. Erie St., Chicago 10, Ill.
Quick Furnace & Supply Co., 215 Court Av., Des Moines 9, Ia.
Quiet Automatic Burner Corp., 33-35 Bloomfield Ave., Newark 4, N. J.
Quiet-Heat Mfg. Corp., 135 N. J. Railroad Av., Newark 5, N. J.
Quigley Company, Inc., 837 Fifth Av., New York 17.
Quincy Stove Manufacturing Co., 907 S. Front St., Quincy, Ill.

R

• RCS Tool Sales Corp., P. O. Box 1434, Joliet, Ill.
R-D Sales Co., P. O. Box 912, Flint, Michigan.
R-S Products Corp., 4530 Germantown Ave., Philadelphia 44.
Raar Manufacturing Co., 3024 W. 6th St., Los Angeles 5, Calif.
Racine Tool & Machine Co., State St., & Carlisle Ave., Racine, Wis.
Radiant Burners, Inc., 1125 Fagan St., Lombard, Ill.
Radiant Utilities Corp., 2817 18th Ave., Brooklyn, N. Y.
• Radiation Furnace Corp., Benton Harbor, Mich.
Radiator Specialty Co., 1722 Dowd Rd., Charlotte 1, N. C.
Rajah Company, 53 Locust Av., Bloomfield, N. J.
Ramtite Co., Div. S. Obermayer Co., 2563 W. 15th St., Chicago 8.
Ran Corporation, Vernon Press Div., P. O. Box 1747, Richmond, Calif.
• Randall Graphite Bearings, Inc., 609 W. Lake St., Chicago 6.
Ransome Co., 4020 Hollis St., Emeryville 8, Calif.
Rapid Heat Corporation, 12317 Turner Av., Detroit 4.
Rapidesign, Inc., P. O. Box 502, Glendale, Calif.
Rattan Mfg. Co., P. O. Box 1745, New Haven 7, Conn.
Rawlplug Co., Inc., The, 271 Church St., New York 13, N. Y.
Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
Rayfield Co., C. L., 2010 S. Halsted St., Chicago 8.
Ray Oil Burner Co., 401-409 Bernal Ave., San Francisco 13.
Raytheon Mfg. Co., 100 Foundry St., Waltham 54, Mass.
Reading Chain & Block Corporation, 2100 Adams St., Reading, Pa.
Redmond Co., A. G., Owosso, Mich.
Red Spot Electric Co., 7405 S. Tacoma Way, Tacoma 9, Wash.
Red Wing Oil Burner Co., Inc., 180 Spruce St., Chelsea 50, Mass.
• Reed Engineering Company, 1003 W. Fairview, P. O. Box 415, Carthage, Mo.
Reed Unit-Fans, Inc., 1001 St. Charles Av., New Orleans 8.
Rees Blow Pipe Mfg. Co., 240 Seventh St., San Francisco 3, Calif.
Reeves Steel & Mfg. Co., Lock Box 107, Dover, O.
Refractory & Insulation Corp., 120 Wall St., New York City 5.
Refrigeration Appliances, Inc., 933 W. Lake St., Chicago 7.
Refrigeration Economics Co., Inc., 1231 Tuscarawas St., E., Canton 2, Ohio.
Rega Mfg. Co., 79 Mt. Hope Av., Rochester 20, N. Y.
Register & Grille Mfg. Co., Inc., 70 Berry St., Brooklyn 11.
Rehm, R., 112 208th St., St. Albans 11, N. Y.
Reichert Float & Mfg. Co., 2223 Smead Av., Toledo 6, O.
Reif-Rexoil, Inc., 37-41 Carroll St., Buffalo 2, N. Y.
Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., Indianapolis 4.
• Reiner & Campbell Co., Inc., 667 Norwood Terrace, Elizabeth 2, N. J.
• Reinhard Brothers Co., 11 S. Ninth St., Minneapolis 2, Minn.
Reliable Gas Products Co., 821 Third St., N. E., Cedar Rapids, Ia.
Reliance Automatic Lighting Co., 1929 Mead St., Racine, Wis.
Reliance Electric & Engineering Co., 1088 Ivanhoe Rd. N. E., Cleveland 10.
Reliance Regulator Div., American Meter Co., Inc., 1000 Meridian Ave., Alhambra, Calif.
Remington Air Conditioning Div., Remington Corporation, Cortland, N. Y.
Rempe Co., 340 N. Sacramento Ave., Chicago 12.
Republic Heater Corporation, 2331 Randolph St., Huntington Park, Calif.
Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown 1, O.
• Republic Steel Corp., Republic Bldg., Cleveland 1.
• Research Products Corporation, 1015 E. Washington Av., Madison 10, Wis.
Reststoflex Corporation, 39 Plansoen St., Belleville 9, N. J.
Retinning Manufacturing Co., 3021 Greenview Av., Chicago.
Revcor, 5201 N. Avondale Ave., Chicago 30, Ill.
• Revere Copper and Brass Incorporated, 230 Park Av., New York City 17.
Revere Products, Inc., 9145 E. Forest Av., Detroit 13.
• Rex Clay Products Co., 14414 Dexter Blvd., Detroit 6, Mich.
Rex Welder and Engineering Company, 1316 E. 10th St., Kansas City 6E, Mo.
Reynolds Electric Company, 3000 River Rd., River Grove, Ill.
Reynolds Gas Regulator Co., 1416 Lincoln St., Anderson, Ind.
Reynolds Mfg. Co., Springfield 2, Mo.
Reynolds Metals Company, P. O. Box 2158, Louisville 1, Ky.
Reznor Mfg. Co., Mercer, Pa.
Rheem Mfg. Co., 570 Lexington Ave., New York 22, N. Y.
Rhodes, Inc., M. H., 30 Bartholomew Av., Hartford 8, Conn.
Richards, J. Merrill, 25 Huntington Av., Boston 16.
Richards-Wilcox Mfg. Co., Third St., Aurora, Ill.
Richfield Mfg. Corp., 139 S. Grand Ave., Baldwin, L. I., N. Y.
• Richmond Radiator Co., Alf. Reynolds Metals Co., 19 E. 47th St., New York 17.
Rieeter & Theemacher Co., 1526 W. 25th St., Cleveland 13.
Riggin Metal Products, Box 267, Kankakee, Ill.
Rigidized Metals Corp., 658 Ohio St., Buffalo 3, N. Y.
Rinehart Inc., Richmond, Ind.
Rival Stran Corporation, 302 W. 29th St., New York City 11.
Riverside Machinery Company, 4000 4th Ave., S., Minneapolis, Minn.
Riverton Lime & Stone Co., Inc., Riverton, Va.
Robbins & Myers, Inc., 1345 Lagonda Av., Springfield 99, O.
Roberts-Gordon Appliance Corp., 137 Arthur St., Buffalo 7.
Roberts Manufacturing Co., 2210 North St., Flint, Mich.
Robertshaw-Fulton Controls Co., Youngwood, Pa.
Robertson, F. L., 58 Rano St., Buffalo.
Robertson Co., H. H., 2400 Farmers Bank Bldg., Pittsburgh 22.
Robinson Heaters, Inc., Columbus 1, Ohio.
Robinson Insulation Co., P. O. Box 1419, Great Falls, Mont.
• Rochester Mfg. Co., Inc., 66 Rockwood St., Rochester 10, N. Y.
Rockford Screw Products Co., 2501 Ninth St., Rockford, Ill.
• Rock Island Register Co., 2425 Fifth Av., Rock Island, Ill.
Rockwood Mfg. Co., Inc., 1801 English Av., Indianapolis.
Roebling's Sons Co., John A., 640 S. Broad St., Trenton 2, N. J.
Roesch Tool Products, 5913 Olin St., Los Angeles 34.
Roessing Mfg. Co., 1616 Noble St., Sharpsburg, Pittsburgh 15.
Roffy Mfg. Co., 3319 E. Slauson Ave., Los Angeles 11.
Rome-Turney Radiator Co., Canal St., Rome, N. Y.
Ronci Machine Co., Inc., F., 2 Atlantic Blvd., Centredale 11, R. I.
Roper Corporation, Geo. D., Blackhawk Park Av., Rockford, Ill.
Roscoe Mfg. Co., 413 Fairview Ave., Seattle, Wash.
Rosebraugh Co., W. W., 680 S. 17th St., Salem, Ore.
Rosedale Foundry & Machine Co., Columbus & Preble Ave., N. S., Pittsburgh 12.
Rose Manufacturing Co., 1731 Arapahoe St., Denver 2, Colo.
Ross Sprinkler Co., 34 Roberts St., Pasadena 3, Calif.
Rossaul Co., 170 Fifth Ave., New York 10, N. Y.
Rotary Concrete Drill Co., 650 S. Arroyo Parkway, Pasadena 2, Calif.
Rotex Punch Company, 4736 E. 12th St., Oakland 1, Calif.
Roto-Beam Division, Peerless of America, Inc., 333 N. Michigan Av., Chicago.
Roto-Table Co., 2605 E. Third St., Dayton 3, Ohio.
Rotor Corporation, P. O. Box 42, Far Hills Br., Dayton 9, O.
Rotor Tool Company, 17325 Euclid Av., Cleveland 12.
• Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
Roxalin Flexible Finishes, Inc., 800 Magnolia Av., Elizabeth, N. J.
Royal-Apex Mfg. Corp., 1389 Atlantic Av., Brooklyn 16, N. Y.
• Royal Heaters, Inc., 1024 Westminster Av., Alhambra, Calif.
Royal Ventilator Co., 415 Locust St., Philadelphia 6.
Royersford Foundry & Machine Co., 55 Main St., Royersford, Pa.
Ruberoid Co., 500 Fifth Av., New York 18.
• Ruby Chemical Co., 74 McDowell St., Columbus 8, O.
Ruby Management Co., 620 Brookline Blvd., Pittsburgh 26.
Rudy Manufacturing Co., Dowagiac, Mich.
Ruemelin Mfg. Co., 2560 N. Palmer St., Milwaukee 12.
Ruggles-Klingemann Mfg. Co., 4 Foster Ct., Salem, Mass
Russell Co., F. C., 1100 Chester Ave., Cleveland 1, Ohio.
Russell Mfg. Co., Inc., John M., Box 246, Naugatuck, Conn.
Rutland Fire Clay Co., 91 Curtis Av., Rutland, Vt.
Ruud Manufacturing Company, 2924 Smallman St., Pittsburgh 1.
• Ryholt Heater Co., 615 Miller St., Ashland, O.
• Ryerson & Son, Inc., Joseph T., 2558 W. 16th St., Chicago 80.

S

S K F Industries, Inc., Front St. and Erie Av., Philadelphia 22.
S K F Steels, Inc., Graybar Building, New York 17.
S.O.B. Products Co., Inc., 282 Nassau Ave., Brooklyn 22, N. Y.
St. Charles Mfg. Co., St. Charles, Ill.
St. Clair Foundry Corp., Beech & Wilson Sts., Centralia, Ill.
St. Clair Rubber Co., Marysville, Mich.
St. Louis Furnace Mfg. Co., 2710 N. 25th St., St. Louis 6.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

St. Louis Tool Co., 6100 Prescott St., St. Louis 15.
St. Paul Corrugating Co., South Wabasha & Water Sts., St. Paul 1, Minn.
Saginaw Saw Co., 222 S. Second St., Saginaw, Mich.
Salisbury Motors, Inc., 1301 E. Lexington St., Pomona, Calif.
Sall Bros., 2339 Kinkwaukee Av., Rockford, Ill.
Sall Mountain Co., 174 W. Adams St., Chicago 3.
Sampsel Time Control, Inc., 600 N. Strong Av., Spring Valley, Ill.
Samuel Stamping & Enameling Co., Manufacturers Rd., Chattanooga, Tenn.
• San Angelo Foundry & Machine Co., Drawer 1587, San Angelo, Tex.
Sandberg Manufacturing Co., 2250 N. W. Yeon Av., Portland 10, Ore.
Sanders, J. A., Box 123, Fulton, N. Y.
Sands Mfg. Co., 5407 Sweeney Av., Cleveland 4.
Sangamo Electric Co., 1301 N. 11th St., Springfield, Ill.
Sanit-Air Products Company, 802 Tower Bldg., South Bend 3, Ind.
Sanitaire Company, 742 S. Hill St., Los Angeles 14.
Santa Clara Metal Products Co., 751 Martin Av., Santa Clara, Calif.
Sanvin Chemical Products Co., 1617 21st Av., Moline, Ill.
Sarco Co., Inc., Empire State Bldg., New York City 1.
Sarcotherm Controls, Inc., Empire State Bldg., New York 1, N. Y.
Sauereisen Cements Co., Sharpsburg Station, Pittsburgh 15.
Savage Co., W. J., 912 W. Clinch Av., Knoxville 1, Tenn.
• Schaefer Brush Mfg. Co., 115-117 W. Walker, Milwaukee 4, Wis.
Schaefer Electrical Products Company, 5604 Twelfth St., Detroit 8.
Scheck, William, 353 Shaler Blvd., Ridgefield, N. J.
Schecter Brothers Co., N. W. Cor. Hancock & Huntington Sts., Philadelphia 22.
Scherr Co., Inc., George, 200 Lafayette St., New York 12.
Schild Manufacturing Company, 4107 N. 13th St., Milwaukee 9, Wis.
Schill Mfg. Co., 202 Mansfield St., Crestline, O.
Schmidgall Manufacturing Co., Inc., 307 Cass St., Peoria 2, Ill.
Schmieg Industries, Inc., 312-320 Piquette Av., Detroit 2.
Schneible Co., Claude B., 2827 25th St., Detroit 22.
Schoedinger, F. O., 322-328 Mt. Vernon Av., Columbus 16, O.
Schori Process Div. of Ferro-Co. Corp., 8 Forty-third Rd., Long Island City 1, N. Y.
• Schwab Furnace Company, 232 W. Florida St., Milwaukee 4.
Schwab Safe Co., East Maine and Blvd., Lafayette, Ind.
Schwitzer-Cummins Co., 1125 Massachusetts Ave., Indianapolis 7, Ind.
Sciaky Bros., Inc., 4916 W. 67th St., Chicago 38.
Scientific Tool Company, 101 Pine St., Dayton, Ohio.
Scottdale Ozone Company, Crescent St., Scottdale, Pa.
Scott-Newcomb, Inc., 1442 S. Boyle Ave., St. Louis 10, Mo.
Scovill Mfg. Co., 99 Mill St., Waterbury 91, Conn.
Scovill Mfg. Co., Waterville Div., Waterville, Conn.
Scoville Mfg. Co., Morency-Van Buren Div., Prairie Av., Sturgis, Mich.
Scully Signal Company, 88 First St., Cambridge 41, Mass.
Seamless Co., 41-22 24th St., Long Island City 1, N. Y.
Seco-Lite Manufacturing Co., 4916 Easton Av., St. Louis 13.
• Security Manufacturing Co., 1620 Oakland Av., Kansas City 3, Mo.
Selectrol Engineering Co., 2036 McDonald Av., Brooklyn 23, N. Y.
Sellers Engineering Co., 4876 N. Clark St., Chicago 40.
• Sequoia Manufacturing Co., 1000 Brittan Av., San Carlos, Calif.
Servel, Inc., Electric Refrigeration Div., 119 Morton Av., Evansville 20, Ind.
Shafco Distributing Corporation, 1354 Book Bldg., Detroit 26, Mich.
Shafer Bearing Corp., P. O. Box 57, Downers Grove, Ill.
Shakeproof, Inc., 2501 N. Keeler Av., Chicago 39.
Shamblen Furnace Parts Co., 625 Hillsboro St., Pittsburgh 4, Penn.
Sharon Steel Corp., Drawer 527, Sharon, Pa.
Shedlov Oil Burners, Inc., 723 Third Av., S. Minneapolis 2.
Sheet Metal Mfg. Co., Inc., 953 Myrtle Av., Brooklyn 6.
Sheet Metal Products Co., 320 S. Commercial St., Peoria 2, Ill.
Sheet Metal Specialty Div., Follansbee Steel Corp., 3rd & Liberty Av., Pittsburgh.
Sheldon Slate Products Co., Inc., Middle Granville, N. Y.
Shell Oil Co., 50 W. 50th St., New York City 20.
Shepard Niles Crane & Hoist Corporation, 410 Schuyler Av., Montour Falls, N. Y.
Sherman & Co., 36-07 Prince St., Flushing, N. Y.
Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland 1.
Shott & Company, Ed., 3478 Reading Rd., Cincinnati 29, Ohio.
Siebring Mfg. Co., P. O. Box 527, George, Iowa.
• Siemon & Co., 2034 Main St., Kansas City 8, Mo.
Sight Feed Generator Co., P. O. Box 35, West Alexandria, Ohio.
Signal Electric Mfg. Co., P. O. Box 75, Menominee, Mich.
Silent Glow Oil Burner Corp., 1477 Park St., Hartford 6, Conn.
Silent Sioux Oil Burner Corp., Orange City, Ia.
Silvercote Products, Inc., 161 E. Erie St., Chicago 11.
Silver Flame Industries, Inc., 2091 22nd St., Detroit 16, Mich.
Simonds Saw & Steel Co., 470 Main St., Fitchburg, Mass.
Simplex Manufacturing Co., 206 North Main St., Fond du Lac, Wis.
Simplex Oil Heating Corp., 11 Park Place, New York 7, N. Y.
Simpson Screen Co., 1050 E. 8th St., Oakland 6, Calif.
Sioux Steel Co., Sioux Falls, S. D.
Sipe & Company, James B., Box 5010, S. Hills Branch, Pittsburgh.
Sisalkraft Co., The, 205 W. Wacker Dr., Chicago 6.
Skilbeck Mfg. Co., 7432 27th Av., Kenosha, Wis.
• Skilsaw, Inc., 5033 Elston Av., Chicago 30.
Skinner Electric Valve Div., The Skinner Chuck Co., 40 Belden Ave., Norwalk, Conn.
Skinner Heating & Ventilating Co., Div. of St. Louis Blow Pipe & Heater Co., Inc., 1954 N. 9th St., St. Louis 6.
• Skuttle Manufacturing Co., 4099 Beaufait Ave., Detroit 7, Mich.
Sleeth & Son, J. E., 910 N. Howard St., Spokane 11, Wash.
Sly Mfg. Co., W. W., 4726 Train Av., Cleveland 2.
Small Lot Stamping Co., 1025 W. Blancke St., Linden, N. J.
Small Motors, Inc., 2076 Elston Av., Chicago 14, Ill.
Smith Company, J. B., 2327 B St., Philadelphia 34.
Smith Corporation, A. O., Milwaukee 1, Wis.; 1213 Norwood Ave., Toledo 7, Ohio.
Smith Furnace Co., 216 S. Croton Ave., New Castle, Pa.
Smith Heater Co., Peter, 10501 Haggerty, Dearborn, Mich.
• Smith, R. E., 1513 Monroe St., Waukegan, Ill.
Smith & Son, Inc., Seymour, Box 591, Oakville, Conn.
Smith Welding Equipment Corp., 2632 Fourth St., S. E., Minneapolis 14.
Smooth-on Mfg. Co., 569-574 Communipaw Av., Jersey City 4, N. J.
Snap-On Mfg. Co., 1028 Blue Island Av., Chicago.
Snap-On Tools Corporation, Kenosha, Wis.
Socony Paint Products, Div. of Socony-Vacuum Oil Co., Inc., 26 Broadway, New York City 4.
Solvay Sales Div., Allied Chemical & Dye Corporation, 40 Rector St., New York 6.
Somers, Inc., H. J., 6063 Wabash Av., Detroit 8.
Sonneborn Sons, Inc., L., 80 Eighth Ave., New York 11, N. Y.
Sonner Burner Co., P. O. Box 903, Winfield, Kan.
Soss Manufacturing Co., 21777 Hoover Rd., Detroit 13.
South Bend Air Products, Inc., 322 E. Colfax, South Bend 22, Ind.
Southbridge Roofing Co., Inc., Hartwell & Chapin Sts., Southbridge, Mass.
South Chester Corp., Finance Bldg., Philadelphia 2, Penn.
Souther Iron Co., R. E., 1952 Kienlen Av., St. Louis 26.
Southern Air Conditioning Mfg. Co., 1309 Calhoun St., Fort Worth 2, Texas.
Southern Aircraft Co., Garland, Dallas Co., Tex.
Southern Heater Corporation, P. O. Box 629, Compton, Calif.
Southern States Iron Roofing Co., Stiles Av. & Louisville Rd., Savannah, Ga.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Southwestern Heater Corporation, Cor. Hawkins & Lamor, Hillsboro, Texas.
Southwest Manufacturing Co., 1615 E. First St., Santa Ana, Calif.
South Wind Division, Stewart-Warner Corporation, 1514 Drover St., Indianapolis 7, Ind.
Spark Stove Co., Inc., 2619 E. 12th St., Oakland 1, Calif.
Sparkler Manufacturing Co., Mundelein, Ill.
Spear Stove & Heater Co., James, 1000 Diamond St., Philadelphia 22.
Speco, Inc., 7308 Associate Ave., Cleveland 9, Ohio.
Speedway Mfg. Co., 1954 S. 52nd Ave., Cicero 50, Ill.
Spencer Thermostat Div., Unit of Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
Spencer Turbine Co., 434 New Park Av., Hartford 6, Conn.
Sperry & Co., D. R., Batavia, Ill.
Sperti, Inc., Beech St. at Kenilworth Av., Norwood, Cincinnati 12, Ohio.
Sponge Rubber Products Co., 230 Derby Place, Shelton, Conn.
Sporlan Valve Co., 7525 Sussex Av., St. Louis 17.
Spray Engineering Co., 114 Central St., Somerville 45, Mass.
Spraying Systems Co., 3201 Randolph St., Bellwood, Ill.
Sprayo-Flake Co., 2715 Irving Park Blvd., Chicago 18, Ill.
Sprouse Company, Inc., V. E., 1504 22nd St., Columbus, Ind.
Spun Steel Div., Automatic Steel Products, Inc., 1201 Camden Av., S. W., Canton 6, Ohio.
Square D Co., 6060 Rivard St., Detroit 11.
Standard Arcoil Corp., 21-23 Broad St., Newark 4, N. J.
Standard Asbestos Mfg. Co., 560 W. Evergreen Ave., Chicago 22, Ill.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Standard Fuel Engineering Co., 667 Post Av., South, Detroit 17.
Standard Furnace & Supply Co., 413-17 S. Tenth St., Omaha 8.
Standard Heater & Oil Equipment Co., 245 Cornelison Av., Jersey City 2, N. J.
Standard Heating Equipment Co., 1406 E. Fourth St., Waterloo, Ia.
Standard Heating & Radiator Co., 532 First Av. & Ross St., Pittsburgh 19.
Standard Pressed Steel Co., Jenkintown, Pa.
Standard Remote Control Valve Co., 205 Pasadena Av., South Pasadena, Calif.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Standard Rolling Mills, Inc., 193 Newell St., Brooklyn 22.
• Standard Stamping & Perforating Co., 2127 W. 49th Pl., Chicago.
Standard Ventilator Co., Lewisburg, Pa.
Stanley Electric Tool Div., The Stanley Works, 480 Myrtle St., New Britain, Conn.
Stanley Tools, New Britain, Conn.
Star Electric Motor Co., 200 Bloomfield Av., Bloomfield, N. J.
Star Expansion Bolt Co., 147 Cedar St., New York City 6.
Star Heater Co., 1012 Powhattan St., Dallas, Tex.
Stark & Company, H. W., 5665 Geddes Rd., R2, Ann Arbor, Mich.
State Steel Products, Inc., 2500 E. 23rd St., Los Angeles 11.
Sta-Warm Electric Co., Ravenna, Ohio.
Steel City Furnace Co., Springdale, Pa.
Steel Products Engineering Co., 1366 W. Columbia St., Springfield, O.
Steel & Tubes Div., Republic Steel Corp., 200 E. 131st St., Cleveland 8.
Stefco Steel Company, Heating Equip. Div., Michigan City, Ind.
Steffens-Amberg Co., 202 Morris Av., Newark 2, N. J.
Steinhorst & Sons, Inc., Emil, 612 South St., Utica 3, N. Y.
Stephens-Adamson Mfg. Co., Ridgeway Av., Aurora, Ill.
Stephens Mfg. Co., 2507 East 15th St., Tulsa, Okla.
Sterling Air Conditioning Corp., 519 Bond Bldg., Washington, D. C.
Sterling Burner Corporation, 14015 Hamilton Av., Detroit 3, Mich.
Sterling Electric Motors, Inc., 5401 Anaheim-Telegraph Rd., Los Angeles 22.
Sterling Engineering Co., 7402 Lansdowne Av., St. Louis 19.
Sterling Foundry Co., P. O. Box 457, Sterling, Ill.
Stewart Manufacturing Co., 2309 E. Washington St., Indianapolis 1, Ind.
Stewart Manufacturing Co., Inc., 610 Bloomfield Av., Bloomfield, N. J.
Stewart Company, W. H., P. O. Box 4, Oklahoma City 1, Okla.
Stewart-Rogers, Inc., 53rd & Whitby Av., Philadelphia 43.
Stic-Klip Manufacturing Company, P. O. Box 52, Cambridge 40, Mass.
Stoker-Lad Co., Division at I, Tacoma 3, Wash.
Stokar-Ola Mfg. Co., 2400 S. Adams St., Peoria, Ill.
Stokol Stoker Co., Inc., 1600 Webster St., Dayton, Ohio.
Stonewall Company, 54th & LaSalle St., Chicago.
Storts & Son, Inc., John, 210 Vine St., Philadelphia 6.
Stossel & Sons Co., Carl, Front Royal, Va.
Stow Manufacturing Co., 445 State St., Binghamton, N. Y.
Strandwitz & Co., Inc., W. J., Jefferson and Master St., Camden, N. J.
Stratton & Terstegge Co., 1501 W. Main St., Louisville 1, Ky.
Streine Tool & Mfg. Co., New Bremen, Ohio.
Structural Slate Co., The, E. Main St., Pen Argyl, Penn.
Struthers-Dunn, Inc., 1321 Arch St., Philadelphia 7, Pa.
Sudbury Laboratory, South Sudbury, Mass.
Sullivan Valve & Engineering Co., 910 S. Arizona St., Butte, Mont.
Sully Engineering, Ltd., 7416 Melrose Ave., Los Angeles 46, Calif.
Sunbeau Heater Company, 2510 S. Hill St., Los Angeles 7.
• Sundstrand Engineering Co., 1325 Seventh St., Rockford, Ill.
Sundstrand Machine Tool Co., Hydraulic Div., 2531 Eleventh St., Rockford, Ill.
Sun-Fire Stoker Corporation, 802 E. Eighth St., New Albany, Ind.
Sunny Sue Burner Co., 108 Annetta St., Syracuse, N. Y.
Sun-Ray Burner Mfg. Corp., 139-24 Queens Blvd., Jamaica 2, N. Y.
Sunshine Mantle Co., Chanute, Kansas.
Super Electric Products Corp., 1067 Summit Av., Jersey City 7, N. J.
SuperO Mfg. Co., 1440 N. Indiana St., Los Angeles 33.
Super Radiator Corp., 6714 Walker St., Minneapolis 16, Minn.
Superior Flux & Mfg. Co., 1202 Ontario St., Cleveland 13.
Superior Manufacturing Co., 1202 Ontario St., Cleveland 13.
Superior Manufacturing Co., Alexandria, Ind.
Superior Mfg. Co., 3204 Penn Ave., Pittsburgh 1, Penn.
• Superior Products Co., 606 S. 14th St., Omaha 3, Nebr.
Superior Safety Furnace Pipe Co., 5330 Forsythe Av., Detroit 2.
Superior Steel Corp., Grant Bldg., Pittsburgh.
Supreme Electric Products Corp., 194 Vassar St., Rochester 7, N. Y.
Supreme Gas Burner Mfg. Co., 9019 VanDyke Av., Detroit 13.
Sure Comfort Furnace Co., 900 S. Des Plaines Ave., Forest Park, Ill.
• Surface Combustion Corporation, 2375 Dorr St., Toledo 1, O.
Swaine Mfg. Co., Fred J., 1300 N. Seventh St., St. Louis 6.
Swallow Airplane Co., 917 E. Lincoln, Wichita 1, Kansas.
• Swartwout Co., 18615 Euclid Av., Cleveland 12.
Swift Electric Welder Co., 8096 Livernois Ave., Detroit 4.
Swift Mfg. Company, Inc., 1455 E. Nine Mile Rd., Hazel Park, Mich.
• Syncromatic Corporation, 1141 Tenth St., Watertown, Wis.
Syntron Co., Homer City, Pa.

T

Tagliabue Corp., C. J., (N. J.), 614 Frelinghuysen Ave., Newark 5, N. J.
Tamms Industries, Inc., 228 N. LaSalle St., Chicago 1, Ill.
Tannewitz Works, 815 Front Av., N. W., Grand Rapids 4, Mich.
Taylor Appliance & Mfg. Co., 339 W. Parent, Royal Oak, Mich.
Taylor Instrument Companies, 95 Ames St., Rochester 1, N. Y.
Taylor-Winfield Corp., 1053 Mahoning Av., N. W., Warren, O.
Technical Processes Div., Colonial Alloys Company, Ridge Av. & Crawford St., Philadelphia 29.
Tecumseh Products Co., Tecumseh, Mich.
Telechron, Inc., Ashland, Mass.
Tempo Products Company, 1900 Euclid Av., Cleveland 15.
Temtrol Mfg. Co., 7136 W. Jefferson Av., Detroit.
Tennessee Coal, Iron & Railroad Co., Brown-Marx Bldg., Birmingham 2, Ala.
Tennessee Enamel Mfg. Co., 4104 Park Av., Nashville 9, Tenn.
Tennessee Products & Chemical Corporation, American Natl. Bank Bldg., Nashville 3, Tenn.
Tenney Engineering Inc., 26 Avenue B, Newark 5, N. J.
Terra-Temp Co., Inc., Circle Bldg., Indianapolis 4, Ind.
Tesco, Inc., 110 S. Norfolk, Tulsa, Okla.
• Thatcher Furnace Company, Centre St., Garwood, N. J.
Thermac Co., 900 E. 109th St., Los Angeles 2.
Thermador Electrical Mfg. Co., Inc., 5119 District Blvd., Los Angeles 22.
Thermal Industries, Indio, Calif.
Therminsul Corp., 1602 Fulford St., Kalamazoo, Mich.
Thermo-Aire Division, Evans Products Company, Plymouth, Mich.
Thermoid Co., Whitehead Rd., Trenton 6, N. J.
Therm Oil Burner Co., 2105-D Westlake Av., Seattle 1, Wash.
Thermomatic Corporation, Church & Elm Sts., Willoughby, Ohio.
Thermo-Products, Inc., North Judson, Ind.
Thomas Machine Manufacturing Co., Etna Branch P. O., Pittsburgh 23.
Thompson Mfg. Co., A. F., 1040 Vernon St., Huntington, W. Va.
Thompson & Company, 1085 Allegheny Av., Oakmont (Pittsburgh Dist.), Pa.
Thompson & Son Co., Henry G., 100 James St., New Haven 5, Conn.
Thomson Electric Welder Company, 161 Pleasant St., Lynn, Mass.
• Thor Metal Products Co., Inc., Box 118, Eastwood Station, Syracuse, N. Y.
• Thor Tool & Die Co., 3444 Morrison Ave., Oakland 2, Calif.
Tierney Rotor Ventilator Co., 239 4th Ave., S., Minneapolis.
Tiffin Art Metal Co., Box 807, Tiffin, Ohio.
Tiffin Eaves Trough Clamp Co., 25 Miami St., Tiffin, Ohio.
Timken Roller Bearing Co., 1835 Dueber Ave., S. W., Canton 6, Ohio.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tinit Manufacturing Co., Inc., 1635-39 Platte St., Denver 2, Colo.
Tinnerman Products, Inc., 2065 Fulton Rd., Cleveland 13.
Titan Valve & Mfg. Co., 9912 Elk Av., Cleveland.
Titeflex, Inc., 500 Frelinghuysen Av., Newark 5, O.
Titus Manufacturing Corporation, 113 E. Eighth St., Waterloo, Ia.
Tjernlund Manufacturing Co., 2140 Kasota St., St. Paul 8, Minn.
Toch Brothers, Inc., 2600 Richmond Ter., Staten Island 3, N. Y.
Toledo Heater Company, 25 S. St. Clair St., Toledo 4, Ohio.
Topflight Tool Co., Huber Building, York 4, Pa.
• Toridheet Div., Cleveland Steel Products Corp., Madison Ave. at W. 74th St., Cleveland 2, Ohio.
Torit Manufacturing Co., 393 Walnut St., St. Paul 2.
Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
Torq Electric Corp., 1002 Interstate St., Bedford, Ohio.
Torrington Mfg. Co., 70 Franklin St., Torrington, Conn.
• Totten Co., Grant, 1215 McKinley Ave., S. W., Canton 4, Ohio.
Townsend Co., 206 River Rd., New Brighton, Pa.
• Trade-Wind Motorfans, Inc., 5725 S. Main St., Los Angeles 37, Calif.
Trane Co., The, LaCrosse, Wis.
Tremont Nail Company, Box 111, Wareham, Mass.
Triad Products Corp., 5113 N. Clark St., Chicago 40.
Triangle Manufacturing Co., 283 Division St., Oshkosh, Wis.
Trindl Products, Ltd., 17 E. 23rd St., Chicago 16.
Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.
• Tri-Saw Corp., 6611 Clayton Rd., St. Louis 17, Mo.
Tri-State Heating Supply Co., Inc., 234-236 Murray St., Fort Wayne 5, Ind.
Tropic-Air Stoker Co., 2017 Indiana Way, N. E., Canton 5, O.
Tropical Paint & Oil Co., 1244-56 W. 70th St., Cleveland.
Trumbull Electric Mfg. Co., Woodford Av., Plainville, Conn.
Truflo Fan Co., 532 Main St., Harmony, Pa.
Tru-Heet Co., 542 Miller Ave., Trenton 10, N. J.
Tru-Mac Mfg. Co., 24 Woburn St., Reading, Mass.
Truscon Laboratories, Caniff & Grand Trunk R. R., Detroit 11.
Truscon Steel Co., Albert St., Youngstown 1, O.
Tubular Rivet & Stud Co., Wollaston 70, Mass.
Turco Products, Inc., 6135 S. Central Av., Los Angeles 1.

• Advertisement in this issue. See Index to Advertisers, page 93-D.

Turner & Seymour Mfg. Co., Lawton St., Torrington, Conn.
Turner Brass Works, 321 Park Av., Sycamore, Ill.
Tuthill Pump Company, 939 E. 95th St., Chicago 19.
• Tuttle & Bailey, Inc., Corbin Av., New Britain, Conn.
Tweco Products Company, English at Ida, Wichita 1, Kansas.
Twin City Gas Specialty Co., 710 W. 27th St., Minneapolis 8, Minn.

U

Uehling Instrument Co., 473 Getty Av., Paterson 3, N. J.
Unexcelled Chemical Corp., 350 5th Ave., New York 1, N. Y.
Unified Air Conditioner Co., 323 W. Michigan St., Duluth, Minn.
Uniflex Metal Hose Corp., 52 Rubber Ave., Naugatuck, Conn.
U-Ni-Matic Heating Systems, Inc., 1303 W. Slauson Av., Los Angeles 44.
Union Mfg. Co., 397 Church St., New Britain, Conn.
• Union Manufacturing Co., Inc., 6th & Washington Sts., Royertown, Pa.
Unique Manufacturing Co., Inc., 318 W. Walton St., Chicago 10.
United Air Heaters, Inc., Medical Arts Bldg., Seattle, Wash.
United-Carr Fastener Corporation, 31 Ames St., Cambridge 42, Mass.
United Chromium, Incorporated, 51 E. 42nd St., New York City 17.
United Cork Companies, Central Av. & N. J. Central R. R., Kearney, N. J.
United Electric Controls Co., 69 "A" St., South Boston 27.
United Gilsonite Laboratories, Scranton 1, Pa.
United Machine Works, Inc., 1306 W. 58th St., Los Angeles 37, Calif.
United Metal Hose Co., Inc., 36-01 43rd Av., Long Island City 1, N. Y.
• U. S. Air Conditioning Corp., Como Av. S. E. at 33rd, Minneapolis 14.
U. S. Electrical Motors, Inc., 200 E. Slauson Av., Los Angeles 54.
United States Electrical Tool Co., 1050 Findlay St., Cincinnati 14.
U. S. Expansion Bolt Co., Inc., P. O. Box 827, York, Pa.
U. S. Gutta Percha Paint Company, 35 Dudley St., Providence 1, R. I.
United States Gauge Div. American Machine & Metals, Inc., Sellersville, Pa.
United States Gypsum Co., 300 W. Adams St., Chicago 6.
U. S. Machine Corporation, Lebanon, Ind.
United States Mineral Wool Co., South Milwaukee, Wis.
United States Radiator Corp., 300 Buhl Bldg., Detroit 31.
• United States Register Co., 324 E. Burnham St., Battle Creek, Mich.
• United States Steel Supply Company, 1319 Wabansia Av., Chicago 90.
U. S. Rock Wool Co., 40 S. Main, Salt Lake City 1.
United States Rubber Co., 1230 Avenue of the Americas, New York 20.
U. S. Stoneware Company, Akron, Ohio.
United States Stove Company, Cedar Av., South Pittsburg, Tenn.
United Wire & Supply Corp., 1497 Elmwood Ave., Providence 7, R. I.
Universal Air Filter Corp., 332 W. Michigan St., Duluth 2, Minn.
Universal Blower Co., 1030 S. Adams Av., Birmingham, Mich.
Universal Cooler Div., Newport Steel Corp., 299 Joseph St., Marion, Ohio.
Universal-Cyclops Steel Corporation, Drawer 153, Bridgeville, Pa.
Universal Gypsum & Lime Co., 111 W. Washington St., Chicago.
Universal Metal Products, 2311 W. Orange, Alhambra, Calif.
Universal Steel Fabricating Co., 570 Mercer, Seattle, Wash.
Universal Welder Corporation, 735 Carnegie Av., Cleveland 15.
• Uno Ventilator Co., 565 Lincoln Av., Cliftondale Station, Saugus, Mass.
Utica Products, Incorporated, Utica 4, N. Y.
• Utility Appliance Corporation, 4851 S. Alameda St., Los Angeles 11.

V

Vacuum Gas Appliances Div. Union Fork & Hoe Co., Rome, N. Y.
Vacuum Gas Burner Corp., 132 N. 1st St., Olean, N. Y.
Vallas, Lionel, 2350 W. Lake St., Chicago 12.
Valley Electric Co., 4221 Forest Park, St. Louis.
Vander Kaay Burner Co., 10304 Nelson Av., Cleveland.
Van Dorn Electric Tool Co., Towson 4, Md.
Van Noorden Co., E., 100 Magazine St., Boston 19.
• Van-Packer Corporation, 135 S. LaSalle St., Chicago 3.
Van Products Co., 1509 G. D. Baldwin Bldg., Erie, Pa.
Van's Gas Burner Service, 20420 Elkhart, Detroit 24.
Van Tuyl & Associates, J. E., B of L E Bldg., Cleveland
Vendor Slate Co., Inc., P. O. Box 204, Nazareth, Pa.
Vent-O-Lite Co., 4230 W. Taylor St., Chicago 24.
Vermont Structural Slate Co., Inc., P. O. Box 98, Fair Haven, Vt.
• Verson Allsteel Press Co., 1351 E. 93rd St., Chicago 19.
Vibrashock Division, Robinson Aviation, Inc., Teterboro, N. J.
Vibration Eliminator Co., 10-38 47th Av., Long Island City 1, N. Y.
Victor Electric Products, Inc., 2950 Robertson Road, Cincinnati 5.
Victor Oil Burner Mfg. Co., 250 Pleasant St., Hartford 3, Conn.
• Viking Air Conditioning Corp., 5600 Walworth Av., Cleveland 3.
Viking Manufacturing Corp., 1747 Chester Av., Cleveland 14.
Viking Pump Co., 410 State St., Cedar Falls 1, Ia.
Viking Shear Co., 1063 W. 19th St., Erie, Pa.
Vilter Mfg. Co., 2217 S. First St., Milwaukee, 7.
Vinco Products, 336 Bond St., Asbury Park, N. J.
Vital Products Mfg. Co., 7500 Quincy Av., Cleveland 4.
Volcano Burner Corp., 3612 E. Tremont Av., New York 61.
Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., 88 Holten St., Danvers, Mass.
Vulcan Radiator Co., 26 Francis Ave., Hartford 6, Conn.

W

W. G. B. Oil Clarifier, Inc., 139 Cornell, Kingston, N. Y.
Wade Manufacturing Co., Div. of Woodruff & Edwards, Inc., Elgin, Ill.
Wagner Awning & Mfg. Co., 2453 Scranton Rd., Cleveland 1.
Wagner Electric Corp., 6400 Plymouth Av., St. Louis 14.
Waldorf Heater Company, 1421 Chestnut St., Philadelphia 3.
Wales-Strippit Corporation, 245 Payne Ave., North Tonawanda, N. Y.
Walker Mfg. & Sales Corp., 1711-1717 Penn St., St. Joseph 1, Mo.
Wall Chemicals Div., Liquid Carbonic Corp., 3100 S. Kedzie Av., Chicago 23.
Wall Colmonoy Corporation, 19345 John R St., Detroit 3.
Walsh Refractories Corp., 101 Ferry St., St. Louis 7, Mo.
Waltham Oil Burner Co., 1314 Bennington St., E. Boston, Mass.
Ward Industries, Inc., Edgar T., 930 S. Pulaski Rd., Chicago 24, Ill.
Ward Heater Co., 1800 W. Washington Blvd., Los Angeles 7.
Ward Leonard Electric Co., 37 South St., Mt. Vernon, N. Y.
• Ward Machinery Co., 564 W. Washington Blvd., Chicago 6.
Warner Ventilator Company, LaGrange, Ind.
Wasco Flashing Co., 87 Fawcett St., Cambridge, Mass.
Washington Steel Corp., Washington, Penn.
Washington Stove Works, 3402 Smith St., Everett, Wash.
Watco Engineering, Inc., 2200 Scranton Rd., Cleveland 13.
Water Cooling Corporation, 71 Nassau St., New York City 7.
Water Cooling Equipment Corp., New Hampshire Av. & Weber Rd., Affton Sta., St. Louis 33.
• Waterman-Waterbury Co., 1122 Jackson St., N. E., Minneapolis 13.
Waverly Heating Supply Co., 31 Union St., Boston 8.
Wayne Home Equipment Co., Inc., 801 Glasgow Av., Fort Wayne 4, Ind.
Weatherall Engineers, Inc., 357 Charles St., Providence 4, R. I.
Weatherhead Co., 300 E. 131st St., Cleveland 8.
Webb Co., Jervis B., Joy Rd. & Alpine Av., Detroit.
Webb Machine and Tool Co., Neville Island, Pittsburgh 25, Penn.
Webber Co., A. R., 780 State St., New Haven 11, Conn.
Webber Engineering Corp., Board of Trade Bldg., Indianapolis, Ind.
Webster Electric Co., DeKoven & Clark Sts., Racine, Wis.
Webster Engineering Co., 419 W. 2nd St., Tulsa, Okla.
Weirton Steel Co., P. O. Box 421, Weirton, W. Va.
Weiss & Co., H., 113-115 Mercer St., New York City.
Wekaler Thermometer Corp., 52 W. Houston St., New York 12.
Weldex, Inc., 7226 McDonald Av., Detroit 10.
Welding Machines Manufacturing Company, 17225 Lamont Av., Detroit 12.
Welding Sales & Engineering Company, 8750 Grinnell Av., Detroit 13.
Weldit, Inc., 990 Oakman Blvd., Detroit 6.
Wells Mfg. Corp., 1313 Wilson Av., Three Rivers, Mich.
Werner Co., Inc., R. D., 295 Fifth Av., New York 16.
Western Blower Co., 1800 Airport Way, Seattle 4, Wash.
Western Brass Mills Div., Olin Industries, Inc., East Alton, Ill.
• Western Engineering & Mfg. Co., 1726 E. Washington Blvd., Los Angeles 21.
Western Felt Works, 4029 Ogden Av., Chicago 23.
Western Mineral Products Co., 1720 Madison St., N. E., Minneapolis 13, Minn.
Western Precipitation Corp., 1016 W. 9th St., Los Angeles 15.
Western Reserve Laboratories, 1433 St. Clair Av., Cleveland 14.
Western Rock Wool Corp., P. O. Box 545, Huntington, Ind.
Western Thermal Equipment Co., 1701 W. Slauson Av., Los Angeles 44.
Western Tool & Mfg. Co., Springfield, O.
Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penn.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

Westinghouse Electric Corporation, Lamp Div., Bloomfield, N. J.
Westinghouse Electric Corp., Sturtevant Div., Damon St., Hyde Park, Boston 36, Mass.
Weston Electrical Instrument Corp., 614 Frelinghuysen Av., Newark 5, N. J.
Westwick & Son, Inc., John, Claude & Meeker Sts., Galena, Ill.
West Wind Corporation, 1800 Airport Way, Seattle 4.
Wheelco Instruments Co., 847 W. Harrison St., Chicago 7.
Wheeling Corrugating Co., Wheeling Steel Bldg., Wheeling, W. Va.
Wheeling Furnace Corporation, Martins Ferry, Ohio.
Wheeling Steel Corp., Wheeling Steel Bldg., Wheeling, W. Va.
Whipple Sheet Metal Works, M. S. & L. H., 913 E. Shiwassee, Lansing 12, Mich.
Whirlaway Motors, Tippecanoe City, Ohio.
White Co., Kelvin & Wilfrid G., 90 State St., Boston 9, Mass.
• White Mfg. Co., 2362 University Av., St. Paul, Minn.
• White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6.
Whiteley Bearing Corp., 1235 S. Ashland Ave., Chicago 8, Ill.
Whiting Corp., 157th St. & Lathrop Av., Harvey, Ill.
Whiting Fire Power Products Corp., 1507 N. 1st St., Superior, Wis.
Whitlock Mfg. Co., 100 South St., Hartford 2, Conn.
• Whitney Mfg. Co., W. A., 636 Race St., Rockford, Ill.
• Whitney Metal Tool Co., 91 Forbes St., Rockford, Ill.
Whitty Company, Inc., 86 Western Av., Boston 34.
Wickwire Spencer Steel Div. Colorado Fuel & Iron Corp., 500 Fifth Ave., New York 18, N. Y.
Wiedemann Machine Co., 4372 Wissahickon Ave., Philadelphia 32.
Wilbur & Williams Co., 43 Leon St., Boston 15.
Wilder Mfg. Co., 2300 S. Main St., Niles, Ohio.
Wiley Manufacturing Co., 4091 Beaufait, Detroit.
Will-Burt Co., Orrville, Ohio.
Williams, Inc., F. C., 8850 Hubbell Av., Detroit 27.
• Williams Oil-O-Matic Div., Eureka-Williams Corporation, 1201 E. Bell, Bloomington, Ill.
Williams Radiator Company, 1821 Flower St., Glendale 1, Calif.
• Williams-Wallace Co., 160 Hooper St., San Francisco 7, Calif.
• Williamson Heater Co., 4555 Marburg Av., Cincinnati 9, Ohio.
• Willis Steel Corporation, 156 N. Academy St., Galesburg, Ill.
Willson Products, Inc., 248 Thorn St., Reading, Pa.
Will-Weld Mfg. Co., Inc., 1524 Marcy St., Omaha 2, Nebr.
• Wilson & Co., Inc., 4100 S. Ashland Av., Chicago 9.
• Wilson, Inc., Grant, 216 S. LaSalle St., Chicago 4, Ill.
Wilson, K. R., 215 Main St., Buffalo 3.
Wilster, Inc., 4700 Detroit Av., Cleveland 2.
Wind-Way Fan & Ventilator Co., 527 St. Joseph St., New Orleans 12, La.
Wing Mfg. Co., L. J., 154 W. 14th St., New York 11, N. Y.
Winkler & Sons, Inc., A. E., 2337 N. 31st St., Milwaukee 10.
Wiremold Company, Hartford 10, Conn.
Wisconsin Oil Burner Co., 1134 Regent St., Madison 5, Wis.
• Wise Furnace Co., 100 Lincoln St., Akron 8, Ohio.
• Wiss & Sons Co., J., 11-45 Littleton Ave., Newark 7, N. J.
• Wodack Electric Tool Corp., 4627 W. Huron St., Chicago 44.
Wolfe-Kote Co., 705 Center Av., Sheboygan, Wis.
• Wolff and Co., Benjamin, 4400 S. Seeley Ave., Chicago 36, Ill.
Wolverine Tube Div. Calumet and Hecla Consolidated Copper Co., 1411 Central Ave., Detroit 9, Mich.
Wood Conversion Co., First National Bank Bldg., St. Paul 1, Minn.
Wood Steel Co., Alan, P. O. Box 112, Conshohocken, Pa.
Wood Mfg. Co., Inc., John, Conshohocken, Pa.
Wood's Sons Co., T. B., 1275 Fifth Av., Chambersburg, Pa.
Woolley Engineering Co., 411 Curtis Bldg., Detroit 8.
Worcester Brush & Scraper Co., Div. Mason Worcester Co., 38 Austin St., Worcester 8, Mass.
Worcester Pressed Steel Co., 99 Barber Av., Worcester 6, Mass.
Worcham Company, Incorporated, 7339 Lohmeyer, St. Louis 17.
Worthington Pump & Machinery Corporation, Air Conditioning & Refrigeration Div., Harrison, N. J.
Worthington Pump & Machinery Corp., Harrison, N. J.
Wright Manufacturing Corp., 395-411 Dunlap St., Delaware, Ohio.
Wright Hoist Division, American Chain & Cable Company, Inc., York, Penn.
Wylie, W. G., 5341 San Fernando Rd., W., Los Angeles 39.
• Wysong and Miles, 635 Fulton St., Greensboro, N. C.
Wyzenbeek & Staff, Inc., 833 W. Hubbard St., Chicago 22.

X

X-Pando Corp., 43-15 36th St., Long Island City 1, N. Y.
• XXth Century Heating & Ventilating Co., 96 Ira Av., Akron 1, Ohio.

Y

Yale & Towne Mfg. Co., Philadelphia Div., Philadelphia 18, Penn.
Yardley Venetian Blind Co., 138 Parsons Av., Columbus 15, O.
Yarnall-Waring Company, Chestnut Hill, Philadelphia 18.
Yeomans Bros. Co., 1433 Dayton St., Chicago 22.
Yoder Co., 5500 Walworth Av., Cleveland 2.
York Corrugating Co., Adams St. & W M RR., York, Pa.
York Corporation, Roosevelt Av., York, Pa.
York Electric and Machine Company, 30-34 N. Penn St., York, Pa.
York Electric Tool Co., S. Summer St. & Penn. R.R., York, Penn.
York-Shipley, Inc., Jessop Place and P. R. R., York, Penn.
Young & Bertke Co., 1004-1014 Hulbert Av., Cincinnati 14.
Young Radiator Co., 709 S. Marquette St., Racine, Wis.
Young Regulator Co., 5209 Euclid Av., Cleveland 3.
• Youngstown Furnace Co., 627 Marshall St., Youngstown, Ohio.
Youngstown Sheet & Tube Co., Stambaugh Bldg., Youngstown 1, O.

Z

Zeh & Hahnemann Co., 183-200 Vanderpool St., Newark 5.
Zeigler-Harris Co., 3900 N. San Francisco Rd., Burbank, Calif.
Zenith Electric Company, 152 W. Walton St., Chicago 10.
Zephyr Heating Products Company, 3404 Lorain Av., Cleveland 13.
Zick Sheet Metal Works, 25150 W. Warren Ave., Dearborn, Mich.
• Zink Co., John, 4401 S. Peoria St., Tulsa 1, Okla.
Zonolite Company, 135 S. LaSalle St., Chicago 3, Ill.

• Advertisement in this issue. See Index to Advertisers, page 98-D.

INDEX TO ADVERTISERS

A

A & A Register Co. 261
Accurate Sheet Metal & Mfg. Works 261
Acme Electric Welder Co. 265
Acme Equipment Company 267
Acme Manufacturing Co. 204
Adams Co., The 267
Aeroflo Corp. 257
Ahlberg Bearing Co. 229
Air Conditioning Products Co. 208
Air Controls, Inc. 83
Air Controls Prod., Inc. .... Inside Front Cover
Airtemp Div. of Chrysler Corp. 181
Airtherm Mfg. Co. 178
A-J Mfg. Co. 198
Ajax Furnace Fitting Co. 259
Allas Engineering Co. 70
Allen Co., Inc., L. B. 218
Alton Mfg. Co. 238
American Furnace Co. 193
American Gas Machine Co. 201
American Machine Products 202
American Radiator & Standard Sanitary Corp. 93
Anemostat Corp. of America 78
Armstrong Co., The 216
Armstrong Furnace Co. 202
Atlas Mfg. Co. 39
Auer Register Co. 11
Auto-Heat 195
Automatic Burner Corp. 210
Automatic Firing Corp. 214
Automatic Humidifier Co. 86
Automatic Products Co. 64

B

Bacharach Industrial Instrument Co. 261
Barber-Colman Co. 12
Barber Gas Burner Co., The 226
Barth Mfg. Co. 250
Bauer & Black, Div. Kendall Co. 185
Bayley Blower Co. 211
Berger Bros Co. 269
Bethlehem Steel Co. 192
Beverly Shear Co. 253
Bishop & Babcock 270
Brandes Company 183
Brauer Supply Mfg. Co., A. G. 95
Brenner Co., Jacob 242
Brown-Appton Co., The 184
Brundage Co. 60
Buffalo Forge Co. 92

C

Calculator Specialties Co. 274
Carnegie-Illinois Steel Corp. .... 36, 59 & 77
Central-West Machinery Co., Inc. 274
Century Engrg. Co. 120
Certified Furnace Co. 199
Champion Tool Co. 274
Char-Gale Mfg. Co. .... 135 to 138
Chicago Metal Mfg. Co. 259
Cincinnati Elbow Co., The 258
Clarage Fan Co. .... 42 & 43
Clayton & Lambert Mfg. Co. 224
Clean Sweep Co., The 271
Cleveland Humidifier Co. 234
Climatemaker Slide Rule Service 271
Cole-Sewell Engrg. Co. 215
Columbia Steel Co. .... 36, 59 & 77
Comfort Products Corp. 29
Conco Engineering Works .... 16, 17 & 256
Condensation Engineering Corp. 6
Connor Engr. Co., W. B. 235
Continental Steel Corp. 47
Corlett-Turner Co. 263
Cotta Transmission Corp. 268
Crescent Tool Co. 168

D

Dahlstrom Machine Works 263
Delco Appliance Div., General Motors Corp. 186
Delco Products Div., General Motors Corp. 179
Des Moines Stove Repair Co. 263
Detroit Air Filter Co. 247
Dole Valve Co. 69
Dowagiac Steel Furnace Co. .... 72 & 73
Doyle Vacuum Cleaner Co. .... 260 & 273
Dravo Corp. 67
Drees & Krump Mfg. Co. 191
Dual-X Furnace Mfg. Co. 229

E

Eisbach, Inc., Albert N. 263
Electrol Burner Mfg. Co., Inc. 96
Elgo Shutter & Mfg. Co. 225
Emerson Elec. Mfg. Co. 46
Empire Ventilation Equipment Co. 267
Enderle Inc., Ltd., Frank X. 271

F

Fallsington Mfg. Co. 245
Famous Furnace Co. 258
Field Control Div., H. D. Conkey & Co. 9
Flagler Mfg. Co., Roy G. 221
Follansbee Steel Corp. .... 50 & 51
Franck and Fric 236
Frey & Co., Frank P. 274
Front Rank Furnace Co. 213

G

G & S Machine Shop 274
Gallaher Co. 269
Galvan Mfg. Co. 255
General Automatic Products Corp. 259
General Controls 63
General Elec. Co. 194
General Filters, Inc. 228
Gerett Corp., M. A. 182
Glasby Mfg. Co., Inc., J. F. 225
Goose Mfg. Co. 271

H

Hall-Neal Furnace Co. 18
Handley-Brown Heater Co. 231
Harrington & King Perforating Co. 249
Hart & Cooley Mfg. Co. .... 22, 23 & 259
Henry Furnace Co., The .... 34 & 35
Hess Co., The 239
Hess-Snyder Co. 270
Hossfeld Mfg. Co. 231
Hussey & Co., C. G. 82

I

Independent Register Co. 23
Inland Steel Products Co. 156
International Metal Products Co. 233

J

Jackson & Church Co. 208
Johnson Gas Appliance Co. 260

K

Kaiser Aluminum & Chemical Corp. 62
Kane & Roach, Inc. 208
Kaustine Co., Inc. 205
Kent Company, Inc., The 264
Kirk & Blum Mfg. Co. 269
Knights Co., The James 260
Ko-Z-Aire, Inc. 91
Krueger Sentry Gauge Co. 8

L

Lau Blower Co. 187
Levow, David 262
Lima Register Co. 209
Little Giant Vaporizer Co., Inc. 241
Livingston, Inc. 272
Lockformer Co. 7

M

M-M-A, Inc. 249
Made-Rite Co., Inc. .... 197 & 249
Maid-O'-Mist, Inc. 54
Majestic Co. 255
Maplewood Machinery Co. 269
Marshalltown Mfg. Co. 255
Master Products Co. 255
May-Fiebeger Co. 267
Mayflower Air Conditioners, Inc. 20
McLarty Systems 265
Mehl Machinery 271
Mercoid Corp., The 251
Meyer & Bro. Co., P. 189
Meyer Furnace Co. 55
Meyer Sheet Metal Machinery Co. 258
Miller & Doling 272
Milton Equipment Co. 273
Minneapolis-Honeywell Regulator Co. .... Inside Back Cover
Monogram Products Co. 247
Morrison Products, Inc. 88
Morrison Steel Products, Inc. .... 206 & 227
Mt. Vernon Furnace & Mfg. Co. 269
Mueller Furnace Co., L. J. .... 24 & 25

N

National Engr. & Mfg. Co. 58
National Heater Co. 253
National Lock Company 222
National Metal Fabricators 267
National Super Service Co. 271
Niagara Machine & Tool Works 71
Norge Heat Div., Borg Warner Corp. 74
Northwestern Stove Repair Co. 84
Norwalk Airconditioning Corp., The 262
Nu-Way Corp. 235

O

Obdyke Inc., Benjamin P. 257
Ohio Valley Hardware & Roofing Co. 244
Oil-Heat Institute of America 252
Olsen Mfg. Co., C. A. .... 26 & 27
Olson & Company, Arthur A. 223
Omaha Stove Repair Works 266
O'Neil-Irwin Mfg. Co. 207
Oran Company, Inc. 269
Owens-Corning Fiberglas Corp. .... 30 & 31

P

Palmer Mfg. Co. 241
Parker-Kalon Corp. 265
Patten Co., J. V. 87
Peck, Stow & Wilcox Co. 248
Peerless Foundry Co. 37
Penn Electric Switch Co. 89
Perfex Corp. 80
Petersen Mfg. Co. 240
Philadelphia Rust-Proof Co. 274
Pioneer Tool Co. 274
Premier Furnace Co. 38

R

R C S Tool Sales Corp. 212
Radiation Furnace Corp. 261
Randall Graphite Bearings, Inc. 19
Reed Engrg. Co. 265
Reiner & Campbell Co., Inc. 274
Reinhard Bros. Co. 243
Republic Steel Corp. 177
Research Products Corp. .... Outside Back Cover
Revere Copper & Brass, Inc. 167
Rex Clay Products Co. .... 52 & 53
Richmond Radiator Co. 85
Rochester Mfg. Co., Inc. 94
Rock Island Register Co. 246
Round Oak Co., Inc. 32
Royal Heaters, Inc. 65
Ruby Chemical Co. 264
Rybolt Heater Co. .... 44 & 45
Ryerson & Son, Inc., Joseph T. 100

S

San Angelo Fdry. & Machine Co. 257
Schaefer Brush Mfg. Co. 223
Schwab Furnace Co. 272
Security Mfg. Co. 237
Sequoia Mfg. Co. 232
Sheet Metal Contractors Nat'l Assoc., Inc. 232
Sleeson & Co. 219
Skilsaw, Inc. 237
Skuttle Mfg. Co. 14
Smith, R. E. 227
Standard Stamping & Perforating Co. 230
Sundstrand Engrg. Co. 10
Superior Products Co. 266
Surface Combustion Corp. 81
Swartwout Co. 56
Syncromatic Corp. .... 5 & 15

T

Tennessee Coal, Iron & R. R. Co. .... 36, 59 & 77
Thatcher Furnace Co. 79
Thor Metal Prod. Co. 269
Thor Tool & Die Co. 271
Toridheat Div., Cleveland Steel Products Corp. 217
Totten, Grant 265
Trade Winds Motor Fans, Inc. 245
Tri-Saw Corporation 257
Tuttle & Bailey, Inc. 66

U

Union Mfg. Co. 264
U. S. Air Conditioning Corp. 196
United States Register Company .... 40 & 41
United States Steel Corp. .... 36, 59 & 77
United States Steel Export Co. .... 36, 59 & 77
United States Steel Supply Co. .... 36, 59 & 77
Uno Ventilating Co. 249
Utility Appliance Corp. 220

V

Van Packer Corp. 99
Vernon Allsteel Press Co. 254
Viking Air Conditioning Corp. 190

W

Ward Machinery Co. 270
Waterman-Waterbury Co. .... 151 to 154
Western Engrg. Co. 268
White Mfg. Co. 90
White-Rodgers Elec. Co. 75
Whitney Mfg. Co., W. A. 28
Whitney Metal Tool Co. 268
Williams Oil-O-Matic Division Eureka Williams Corp. 61
Williams-Wallace Co. 251
Williamson Heater Co. .... 48 & 49
Willis Steel Corp. 273
Wilson & Co., Inc. 3
Wilson, Inc., Grant 239
Wise Furnace Co. 188
Wise & Sons Co., J. 68
Wodack Electric Tool Co. 274
Wolff & Co., Benjamin 13
Wysong & Miles Co. 21

X

XXth Century Htg. & Vent. Co. 76

Y

Youngstown Furnace Co. 256

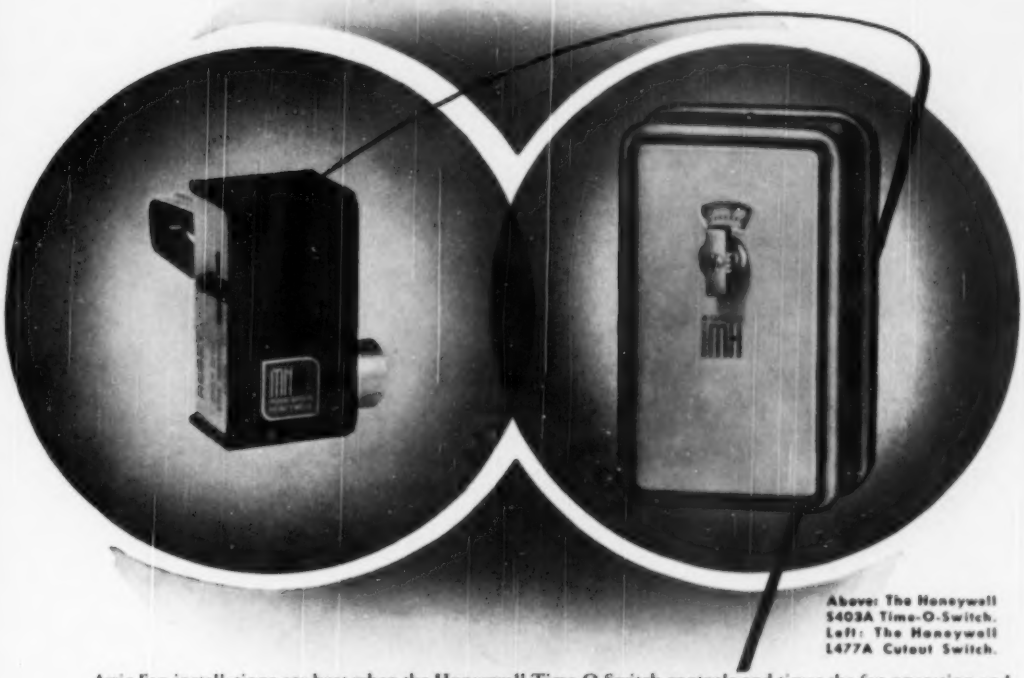
Z

Zink Co., John 57

Let the HONEYWELL TIME-O-SWITCH

CONTROL and the Cutout Switch

PROTECT Attic Fan installations



Above: The Honeywell S403A Time-O-Switch. Left: The Honeywell L477A Cutout Switch.

Attic Fan installations are best when the Honeywell Time-O-Switch controls and times the fan operation and the Honeywell C··tout Switch protects the home against the hazards of continued fan operation in case of fire.

The Time-O-Switch is simplicity in itself. After the length of fan operation has been determined for any period from one-half hour to eleven hours, a simple twist of the wrist starts the fan. It automatically stops when the time expires. Continuous operation is provided by a small lever on the side of the case and the fan may be instantly stopped by merely turning the dial. Actuated by the famous Honeywell Mercury Switch, theTime-O-Switch will produce long, safe and positive switching service for many years. Its handsome silver bronze case will grace any room.

Use the Honeywell Time-O-Switch for any switching operation where time interval switching is involved, and use the Cutout Switch to insure protection. Minneapolis-Honeywell, Minneapolis 8, Minnesota. In Canada: Leaside,Toronto 17, Ontario.

MINNEAPOLIS
Honeywell
CONTROL SYSTEMS

73 BRANCHES FROM COAST TO COAST WITH SUBSIDIARY COMPANIES IN: TORONTO • LONDON • STOCKHOLM • AMSTERDAM • BRUSSELS • ZURICH • MEXICO CITY

AN INVITATION
TO ATTEND OUR
Premier Showing
AT THE
SOUTHWEST
AIR CONDITIONING EXPOSITION
Dallas—January 23 to 27, 1950

BOOTH 438

A MULTI-VELOCITY AIR-FILTER *by* RP

THE years of continuing research and development that have gone into the building of all previous R-P Air Filters is background for the surprising performance of the new filter to be announced at the Dallas Show. We assure you that a visit to our booth will prove interesting and valuable to you. If you are not in Dallas, a post card will bring the story direct to your office.

Write Research Products Corp., Department A, Madison 10, Wis. Canadian Representative—Delhi Industries, Delhi, Ontario.

RP . . . PRODUCTS OF RESEARCH

WASHABLE AND REPLACEMENT AIR FILTERS • GREASE FILTERS • EVAPORATIVE COOLER MATERIALS